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Steady grip

Dole puts the squeeze on its fruit snacks 24



Flexible automation 40 Let's go, PACK EXPO 57



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design trends

Special-edition soup for Campbell's

Campbell's Soup issued a special-edition package for its Tomato Soup in March that's raising excitement with special-edition cans designed to remind consumers of the source and quality of their ingredients. For more than 70 years, the Campbell Soup Co. has cultivated seeds that American farmers use to grow tomatoes for its soups. Believing that quality ingredients are grown

from the ground up, Campbell's launched the program, entitled, "Help Grow Your Soup"



Tomato

SOUP

program, offering free packs of seeds with the purchase of one can of soup. Campbell's donated the seeds to plant gardens in urban communities and schools in support of the National FFA Organization (formerly known as the Future Farmers of America). Can label graphics, designed by Anthem Worldwide, a Schawk Strategic Design co.(http://anthemww.com), maintain the soup's core messaging along with sparking new interest in where quality

food comes from and what consumers can do to participate in its program. The results have a forward-looking approach, embracing simplicity, wholesome ingredients and a temporary new twist to the iconic label elements. Offset-printed by **Hammer Packaging (www.hammerlitho.com)** in six colors with U.V. ink and coatings, the labels are in line with Campbell's mission to nourish people's lives everywhere, every day. "It isn't every day that Campbell deviates from its known tradedress, but there are times when it makes sense, validates an important idea and brings attention to a good cause," says Darralyn Rieth, director of global design at Campbell Soup. "Anthem's design rises to this rare occasion and accomplishes the objectives."

Earthbound Farms moves to 100-percent PCRPET

Organic produce marketer Earthbound Farms is converting all of its plastic clamshell packages for lettuce and other produce to those made of 100-percent post-consumer-recycled PET (PCRPET). The organic produce grower is emphasizing its commitment

to protecting the environment with the new clamshells, which are thermoformed by Packaging Plus (www.packagingplusllc.com) using material made from used soft drink bottles. The PCRPET is made from previously used plastic products such as soda or water bottles that would otherwise end up in landfills. The clear clamshell package is light, shatter-resistant and recyclable. Earthbound believes its conversion to 100-percent PCRPET for packaging will conserve 424,000 million BTUs and 68,307 gal of water, as well as eliminate 16,191 tons of carbon dioxide and divert 1.3 million lb of solid waste from landfills. A p-s paper label featuring redesigned grahics is supplied by Spectrum Label (www.spectrumlabel.com) for Earthbound's salad greens packages. The label calls out the packaging's post-consumer content.

Get hydrated with protein tea

Unlike many protein drinks on the market that are in the form of a shake,
Poze, which was introduced last month by Vigorous Brands Inc., is a hydrating
protein green tea. "We introduced Poze because we felt there was a need
for a protein product that acts as a natural hydrator." says principal owner

Phil Marchese. "Green tea has a tremendous amount of health benefits, and the idea was to marry all of the benefits of whey-protein isolate with the benefits that go along with green tea." Poze has 40 g of whey-protein isolate, vitamins and minerals, but contains no sugar and only 2 g of carbohydrate. The suggested retail price is \$3.59 to \$3.99 for a 20-oz serving. Poze is produced by contract packer Diamond Drinks Inc. (www.diamonddrinksinc.com). The PVC bottles are produced by Suscon Inc. (570/326-2003) and the shrink-sleeve labels are supplied by Creative4sight Inc. (www.creativefoursight.com). The labels and company logo were designed by Mosaic Interactive (www.mosaicwebsite.com). "The market response has been tremendously positive," says Marchese.



Taunch pad New Product of the Month

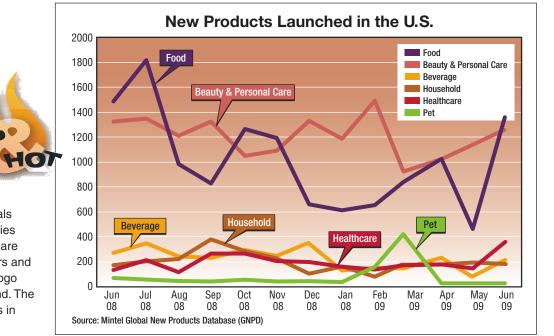
A hipper hip flask

Innovative alcoholic beverage packaging tends to be introduced on a relatively limited basis, with many traditional wines and spirits available in traditional packaging. Now, Spain's Torres Flavours is

launching a set of Brandy
Sprays, including Moscatel
Oro as well as some of its

The pack include three of Torres' traditional products, so the glass vials are a new way to present the brandies to a new target audience. The vials are capped with plastic spray dispensers and are screen-printed with the Torres logo and displayed in a clear plastic stand. The company suggests using the sprays in coffee, cocktails and desserts.

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design trendsbeauty care

Cosmetic packaging that's more than a pretty case

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With more than 95-percent natural ingredients, including extracts from fruits and flowers, ALMAY pure blends™ is a makeup line that espouses petal soft textures and weightless formulas. With the help of Anthem Worldwide, a Schawk Strategic Design Co. (www.anthemww.com), Revlon, which owns the ALMAY brand, brought this light touch to the pure blends packaging design. Soft blushes of color are layered on clean white containers that are made from an average of 44 percent recycled materials.

Basing its comparison on a new packaging process that eliminates traditional blister card packaging, uses clear film

instead of chipboard, and uses smaller shippers, Revlon projects that 1 million units of ALMAY pure blends loose finishing powder saves 52.5 tons of paperboard, 890 trees, 215,570 KWh energy, 368,060 gallons of water, 173.5 cubic yards of landfill and 3,150 lb of air pollution.

Inspired by the "natural look" of Almay models,
Anthem Worldwide used transparent overlays of color.
"[The design] is a little soft, a little more quiet," Kantanas notes. "We let the green come forward and deliver the [eco-concious] message and let the pink be in the background as a feminine message of

Men's moisturizer triumphs in a pump dispenser tube

For L'Oreal's Biotherm Homme Force Supreme Neutralizer, a daily anti-wrinkle moisturizer for men, **Rexam (www.rexam.com)** supplies an airless package with a striking appearing but also protects the formulation. Powered by a soft-actuating SP343 pump, the dispensing tube design is building prestige brands in a wide range of fast-growing market segments, including men's personal care and sun care, according to Rexam's Personal Care Div.

Pre-assembled and shipped as a single pump-and-tube combination for high-speed filling, the package for Biotherm includes a dispenser tube from **CTL Tuboplast (www. tuboplastctl.com)** and is fitted with a metal collar for a sleek, sophisticated look. "We anticipate further use of this airless combination in upscale product launches in segments such as men's facial care and suncare," says Rexam's product manager Virginie Lemeunier. Prestige brand consumers appreciate the clean easy-to-use design, with its precise dosage, complete evacuation and a 360-degree application."

Engineered for viscous creams, the SP343 pump has no precompression and can be actuated by even the lightest touch.

Clear gift-set closes the Gap

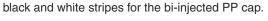
The Gap's fragrance, Close, in 100- and 50-mL teardrop-shaped bottles, gets a luxurious gift-set package injection-molded in clear crystal PS by **DAPY (www.dapyparis.com),** which handled the development and production of the clear box. The U-shaped base box is produced with a star-shaped insert that keeps the fragrance

bottles in place. The cover, also in the U shape, is also made of clear PS with an integrated "chimney" to hold the cap in place. On the front panel, the Gap logo is screen-printed in one color. Once the cover and base are assembled, the closure is practically invisible.

Dramatic 2-in-1 mascara packaging

Bourjois Paris' latest mascara, "Coup de Théâtre" offers the long, lush false-eyelash effect without the dual mascara applicator. A white, thermoplastic, injected brush gives lashes maximum volume and length, thanks to the distribution and shape of its edges. Provided by Alcan Packaging Beauty (www.alcanpackagingbeauty.com), which

invented the first injected brush model (the AP28), the brush allows an endless range of shapes and colors. Coup de Théâtre comes in 5 party colors for a look to match the mood. Borjois also wanted a complete two-color model that included a white brush, which has striking visual impact. The 2-in-1 concept is evident in the package design, where black and white colors intertwine—black for the screen-printed base, white for the brush and







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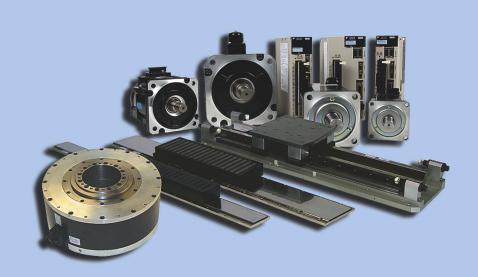
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Comment John Kalkowski, Editorial Director

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In July, Packaging Digest was recognized with five awards for editorial excellence from the American Society of Business Publication Editors (ASBPE). The ASBPE program is highly competitive, with entries from hundreds of publications representing business, professional, association and trade magazines. Packaging Digest won Gold and Silver national awards for its July

Packaging Digest won Gold and Silver national awards for its July 2008 and December 2008 cover designs, a Gold regional award for a computer-generated cover design in May 2008, a Silver national award for its Pack Expo Show Daily and a Bronze regional award for a November 2008 article explaining the results of its annual sustainability survey, co-sponsored by the Sustainable Packaging Coalition.

Former Secretary of State Colin Powell reportedly once said, "The healthiest competition occurs when above-average people win by putting in above-average effort."

That's exactly what these awards represent. The staff of *Packaging Digest* comprises a group of individuals devoted to producing the type of information you need to be successful in your packaging career. We try to listen carefully to what you tell us and then endeavor to present industry information in ways that are useful to you.

It's important that a trade publication like *Packaging Digest*

keeps a finger on the pulse of the industry. In a recent study,

readers told us repeatedly that they rely most on *Packaging Digest* for new packaging ideas and to stay current on the latest industry trends. That's why we work hard to conduct research relevant to our

readers and monitor the tradeshows that serve as a wellspring of innovation for packagers.

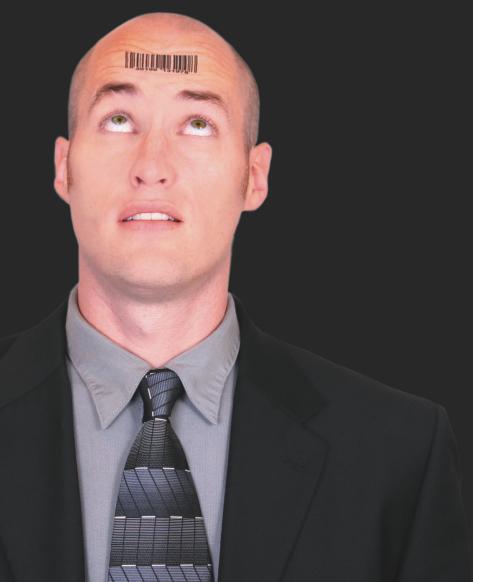
Packaging Digest places a high emphasis on its magazine covers because they reflect the importance that the industry places on packaging design and functionality. Our readers look to Packaging Digest to showcase the best packaging examples so they can use them in brainstorming their own new products.



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John Kalkowski

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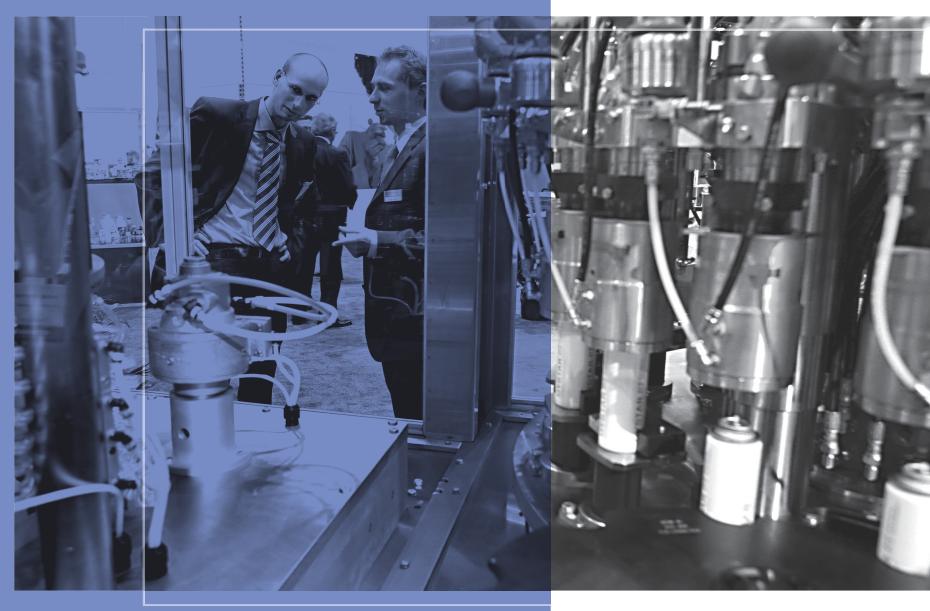


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Safety guarding Safety and sanitation guarding has a stainless-steel framework with hinged, clear, PC doors to enclose all sides of equipment. The framework is angled to prevent product pooling. Electrical interlocks are on the doors to disable a filler if a door is opened while the filler is running. The guarding is available in 1- and 2-tier with HEPA filtration. The guarding has been designed to be base mounted onto the co's machinery or retrofitted to an existing filler of any brand.

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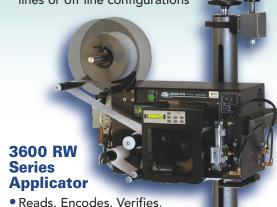
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x-ray inspection system helps ensure product and package integrity by reliably identifying contaminants, scanning for missing or broken products, detecting packing voids, confirming fill levels, controlling product and package mass and fat analysis. The system features a 15-in. touchscreen, full-color display that accesses Windows XP and shows real-time images and diagnostic data. Additionally, it automatically analyzes product variations to consistently achieve optimum sensitivity throughout production, with no frequent calibration required. With its adaptive software algorithms, the





E-System 2000 provides automatic, horizontal cartoning at up to 1,500-cartons/hr while using minimum floorspace. The machine has the ability to erect cartons onto a single product-loading station and automatically discharge completed cartons for the next operation. The cartoner can also allow an operator to load product with the help of a stainless-steel guide shelf or can be equipped with optional automatic product-loading conveyors and devices. Additionally, the cartoner can close end flaps using either glue seal-end or tuck closure methods and features optional date/lot coding devices and more. Econocorp Inc., 781/986-7500.

www.econocorp.com

Case packer The Bergami Model K15 horizontal case packer with a robotic mini palletizer cell creates a high-speed solution for case packing and palletizing cartons, bundles, trays and pouches for pharmaceutical, nutraceutical, cosmetics and other consumer goods applications. The case packer's design requires an area of only 17-ft and 1-in. by 7-ft and 7-in. and features a Fanuc M-20iA robot standard, but may incorporate a number of models, depending on the payload and reach requirements of the application. The

case packer is capable of packing up to 15-case/min, while the integrated robotic pallet cell handles up to 30-cases/min. The case packer features 15- to 20-min changeovers and touchscreen controls.

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Label printer/applicator The TwinPrint label printer/ applicator can print on both sides of p-s label stock--the top surface and the liner. By selectively die-cutting the label construction, a portion of the liner remains with the label. A 4x4-in. label can contain as much information as a standard 4x6-in. PS label, which is a 30-percent reduction in label material, the co. reports. The printer/applicator uses direct thermal/thermal printing or direct thermal/thermal-transfer printing. In the case of direct thermal/thermal printing, the label printer applicator can use the patented 2STTM direct thermal paper, a thermally sensitive facestock with a thermally-sensitive coated liner. FOX IV Technologies Inc., 877/436-2434. www.foxiv.com



Inspector system The New Glass Inspector system provides 360-deg inspection of glass food and beverage containers, detecting small foreign objects and glass particles that may be inside a new container. The system operates at line speeds up to 1,400 containers/ min. The bottle exterior is protected during inspection with no-scuff clear rolling rotator

Industrial Dynamics/Filtec, 310/257-2291. www.filtec.com



Clamps Metric clamping components and linear actuators offer a flexible, cost-effective way to construct fixtures, machine guard units and equipment bases using standard round and square tubing, the co. states. One-piece split clamp connectors and multi-part clamps are available in aluminum with a shot-blast-tumbled finish and a black powder-coated finish. Tube clamps are used to mount linear actuators in a static position for applications requiring linear movement.

J.W. Winco, 800/877-8351. www.jwwinco.com

Conveying system The Infinity Series accumulator increases throughput and minimizes downtime, the co. states. The system works with containers from tapered wine bottles and 2-mL vials to cups and nonround containers. Can be configured as a high-speed single filer or a continuous-motion laning device.

Garvey Corp., 800/257-8581. www.garvey.com



Motion drives MDrive AccuStep all-in-one motion systems offer compact, low-cost solutions for packaging applications. When applied to stepper motors, the motio-control technology prevents the loss of synchronization due to transient or continued overload, extreme acceleration and deceleration or very slow speeds. The technology doesn't lose functional control of the motor, the co. states. Intelligent Motion Systems Inc., 860/295-6102. www.imshome.com





new products_{equipment}

Diaper bagger The OPTIMA D3.1 packs baby diapers from very small sizes to very large with the help of a commensurate module. Large-size packages can be produced in two rows and two layers simultaneously. Maximum package dimensions reach 560x500x270 mm. The machine features robot pushers that convey the diapers from a stacker to a precompression station. A patented system advances the functional modules to the bagger in the product-flow direction. For one-lane operation, this achieves a shorter transport path, optimized with regard to motion.

Optima Machinery Corp., 920/983-3125. www.optima-usa.com



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Hot-melt systems The co.'s

PUR hot-melt units are designed for the delivery of PUR (polyurethane reactive) hot melt. They feature a locking-lid assembly and a nitrogen or dry-air kit. Each time the lid is opened and closed, there is a burst from the nitrogen kit that injects a blanket of nitrogen or dry air onto the top of the molten adhesive to keep it from curing inside the melt tank. The melt units are available in 16and 30-L capacities, with multiple gear pumps and up to 6 hose/gun outputs. They can be used with a range of standard hoses and are typically used with zero-cavity or hot-melt valves and short engagement nozzles.

Valco Melton, 513/874-6550. www.valcomelton.com



SCARA robot The new RS3 SCARA robot, a zero-footprint system, saves floorspace, the co. states. Features a 350-mm SCARA arm and can be easily integrated into compact assembly cells. The robot's work envelope allows for design flexibility with 450-deg of axis rotation for omnidirectional access. The SCARA robot is suitable for lab automation and other process-heavy applications where large quantities of parts are

the co. states. **Epson Robots**, 562/290-5910.

presented to process or testing stations

www.robots.epson.com

Pharma cartoner The Stealth™ cartoner operates at speeds up to 250 pieces/ min in either a batch mode for presealed blister-cards, or as an automated, online system to bundle the carded blisters. The cartoner can be adapted to handle future conventional cartoning applications. The cartoner can be also be utilized for blister loading as it features both batch mode or an online mode with a thermoformer, with an optional ECP prefeeder available to reduce the number of operators required.

MGS Machine Corp., 763/425-8808.

www.mgsmachine.com





Bread bagger A dual

automation system utilizes two counter/ stackers and two auto-stack indexers for both bagging and wrapping. The versatile functions can run one line to the bagger and one to the wrapper, or both lines can run to either the wrapper or bagger, the co. states. An optional Eye-Pro vision system is also available for integration with the automation lines. The system offers a dual line of automation for tortillas, pizza crusts and other flatbreads. Arr-Tech Inc., 866/852-2442. www.arr-tech.com

Bagger The 3CM-5 baggers place an empty bag on a spout, fill it (typically with 20 to 50 lb of product) and close the bag top (by heat sealing or sewing), maintaining bag-top control through the process to achieve consistency and maximum throughput. Machines include the 3CM-52, 3CM-55 and 3CM-5U models with capacities from 350 to 600 bags/hr.

American-Newlong Inc., 317/787-9421. www.american-newlong.com



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new productsmaterials

Rigid containers

Foamed bottles The oPTI™ foamed PET bottle technology provides desirable features and esthetics for brand owners looking for a distinctive visual presence, while at the same time retaining the recycling benefits of the clear PET wastestream. The molding process enables white or silvery colored bottles to be made without additives that can limit package recycling. Containers also have a unique surface feel and provide tactile "traction," which minimizes slipping. This process also affords prominent details, which enables decorations such as embossed logos to stand out better. The co. says its bottle capability is based on using the MuCell® microcellular foam injection-molding technology to produce preforms that then can be blow-molded on conventional equipment.

Plastic Technologies Inc., 419/867-5400. www.plastictechnologies.com



Multipack Eco-friendly Cap-it paperboard multipack provides structural integrity, billboarding and portability while serving as an enviro-friendly solution that meets sustainability needs and supply-chain economics requirements, the co. states. Converted from .018 SUS® beverage board with tear- and humidity-resistance, the beverage carrier includes a comfortable hand hole and uses the shoulder strength of the bottles it carries to enhance stiffness, creating a more secure handling experience and lowering the risk of accidental drops. The minimal design uses less fiber, a renewable and recyclable natural material and allows consumers to view the bottled beverages for quality assurance. The billboard is adequately sized for branding and promotional graphics, backside printing, product traceability codes and onserts. The multipacks are available for bottles in a range of sizes from 12- to 32oz. The innovative packs are supported by a redesigned second-generation packaging machine capable of running up to 150-packs/min to provide higher line efficiency.

Graphic Packaging Intl. Inc., 770/644-3000. www.graphicpkg.com



PET tray/lids New Fresh Performance® 13-in. round, six-compartment black PET tray with vented and nonvented, transparent PET lid options offers a fresh way to display products in compartmentalized sections with contemporary style. Uses include catering, institutions, foodservice, deli and gift-packs for fresh cut produce, vegetables, cheese, candy, nuts, processed meats and more. Two lid options are available. A vented lid is designed as a companion to trays that have been film-sealed. Molded structural elements create a ½-in. void between the film and the inside of the lid, enabling oxygen transfer that can minimize spoilage and extend

Wilkinson Industries Inc., 402/468-5511. www.wilkinsonindustries.com

Jars The co.'s 30-mL crystal clear PS jars with black caps are the right size for 1 oz of powder or cream-based makeup. The jars feature a PE sifter for easy dispensing of any powder makeup product, particularly mineral-based formulations, along with a patent pending, non-latex tan foam insert (1.59-in. dia) to prevent spillage. Smaller size 10-mL jars with black caps are also available with patent-pending 1.07-in. tan foam inserts and clear sifters. The customizable jars and caps can be imprinted with a logo and are sold separately.

Qosmedix, 631/242-3270. www.qosmedix.com





PET tablet bottles The co.'s line of PET pharma tablet bottles are designed specifically for the nutraceutical, vitamin, dietary supplement and related healthcare industry segments. The oblong shape makes them convenient for consumers to hold and open. Intended primarily for tablet use, the bottles can also be used to hold liquid and powder formulations. The bottles are available in 160-, 250- and 375-cc capacities with a 38-400 neck finish. They can be molded in either clear PET or in a color of the customer's preference.

Silgan Plastics, 315/536-5690.

www.silganplastics.com

Standup pouches Standup pouches are moving frozen seafood brands out of cartons and into improved competitive positions in the marketplace, the co reports. They can save space in home freezers, are resealable, so help to inhibit freezer burn and ensure fresher product. Hermetically sealed SteamRight™ pouches for steam-in-bag applications deliver precision steam venting and safe, easy opening as well as exceptional durability for frozen foods. The pouches are available as rollstock or premade, and can be flexo- or gravure-printed in up to 10 colors. Options include slider closures and press-to-close resealing features, proprietary LaserTear® laser scoring, fitments and handles.

Alcan Packaging Food Americas, 773/399-8037. www.alcanpackagingfood.com





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Coated barrier films Interfilm Holdings Inc. has signed a distributor agreement with NanoPack Inc. NanoPack's patented NanoSeal™ substantially enhances oxygen and aroma barriers and is adaptable to a variety of substrates and printing methods, while delivering multiple environmental advantages. The barrier films can substantially reduce the cost of traditional barrier packaging structures, according to the co. Production advantages for the barrier films include performance and economic improvements. In addition, their environmental benefits consist of improved gas barrier properties and as much as 90 percent less material usage. The barrier films also eliminate the chlorine inherent in barrier coatings, thereby solving related processing and disposal hazards, the co. adds. The coatings can be reground for reuse and are biodegradable.

NanoPack Inc., 864-269-4690. www.nanopackinc.com

Color-changing ink

Using temperature-activated inks supplied by LCR Hallcrest, the co. is able to produce in-mold labels that change color when activated by hot, cold or "touch" through body heat. These labels have been shown to effectively withstand the high temperatures of the in-mold process. Thermochromic ink, used in place of standard ink on-press, changes from white to a designated color once activated. This technology can be used for both novelty/marketing purposes and practical/safety purposes. Custom colors are available. However, the standard color-change options are black, blue, red, orange, green, magenta, purple and turquoise. Metallic labels and rollfed labels for injection in-mold products are also available to allow customers to create graphics that have a highly reflective metallic look for eyecatching graphics on many injection in-mold products or parts. Inland Label, 608/788-5800. www.inlandlabel.com

DVD trays The co. introduces its nine disc trays for DVD and Blu-ray™ packaging. The new trays are designed to hold more than one disc (with one exception for Blu-ray). The co.'s offerings consist of the Thin Pozzoli Twin Tray, the Polymatrix DigiTwin Tray and a collection of Novatray® trays from Europe's MIP Packaging that can accommodate single, double and triple-disc releases. The multi-disc trays can be paired for standard and special packaging designed for a variety of Home Entertainment products, including movie titles, TV series and documentaries, music concerts, audio books, video games and computer software. **Shorewood Packaging,**

212/508-5662. www.shorewoodpackaging.com



Multilayer technology

Gamma-Clear technology features the use of OPP and EVOH with a 'compatibilizer' to strengthen the container's properties and prevent de-lamination. The co.'s multilayer OPP technology allows for crystalclear plastic food containers with a long shelf life. This technology features glass-like clarity and lightweight, unbreakable packages that are sustainable. Commercial applications have begun making their way into the market, taking this technology beyond its development phase. The materials, machinery and processing know-how are readily available to brand owners and converters worldwide, says the co. Kortec. Inc., 978/238-7100.

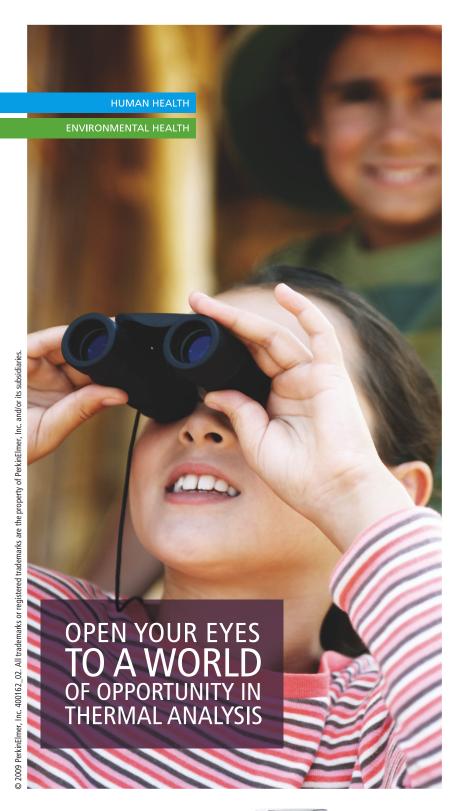
www.kortec.com

diameter plastic pails is designed for food products, lubricants, powdered detergents, inks, liquid and powdered chemicals, paints and coatings, construction materials, adhesives and sanitation chemicals. The pails are injection-molded in one piece with tapered walls. Smooth, inner walls aid nesting and separation for easy storage and handling. The handle mounts into ear blocks for secure, personal handling while the pail bottom also fits snugly into the cover for enhanced stacking and shipping. The pails are manufactured of recyclable HDPE and are available

Plastic pails A line of large-

FDA/HPB-approved colorants. Industrial Containers, Ltd., 416/231-5020. www.icl.ca

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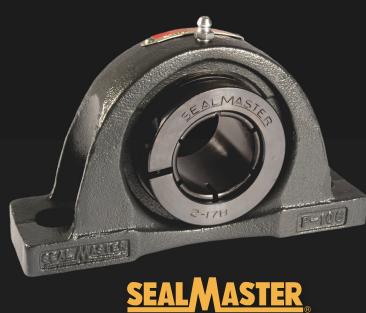


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Bottles Medico round bottles are typically used for pharmaceuticals, vitamins and nutritional supplements but are suitable for a wide range of other applications. The bottles are available in 75-, 100- and 300-mL sizes and feature a wide mouth. They are manufactured in HDPE and PP and are suitable for liquids or tablets.

M&H Plastics, 540/504-0030. www.mhplastics.com





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Pre-zippered rollstock

The Pour & Lok™ resealable packaging is now available in pre-zippered rollstock for f/f/s applications. The packaging is a side-gusseted, reclosable structure with a press-to-close zipper located in the side gusset. Once the top of the package is opened, the gusset can be pulled away to form a pour spout. The zipper can also be extended beyond the gusset and into the body of the bag to make a larger opening, which allows easy scooping or pouring of the product. The specially designed foldable zipper can then close the bag while the spout remains in the extended position. The reclosable packaging can be pre-applied to roll stock used in f/f/s machinery or can be used in conjunction with pouchmaking machinery for premade pouches with reclosability.

Hudson-Sharp Machine Co., 920/494-4571.

www.hudsonsharp.com



Swing stopper The co.

introduces a PET bottle that comes equipped with a swing stopper. The bottle with its swing stopper is available as a preform, or as a blown bottle, in 500- and 1000-mL for beers and sodas.

Edard, 33 0 3 88 66 36 36. www.edard.com



Shrink labels PVC/PETG/OPS clear and/or printed shrink sleeves, labels and seals help promote thousands of products in food and beverage, cosmetic and personal care, healthcare, medical and pharmaceutical, and chemical applications, the co. says. Available as neckbands and full-container sleeves, the heat-shrinkable labels enhance packaging while offering tamper-evidence. Clear and printed cut bands and tubing come in a wide range of lay-flat sizes. The labels feature up to 10-color gravure printing and the colored film is available in a wide variety of shades.

Ameri-Seal Inc., 800/220-7981. www.ameri-seal.com



OPET bottles A family of oblong sauce bottles includes two clear OPET bottles in 12- and 18-oz sizes. Both come with a 38/400 neck finish suitable for a variety of closure and dispensing options. They serve a number of food applications, including BBQ sauces, dressings, seasonings and more, the co. states. The shape of the bottles makes them easy to grip and they have ample room to promote the product through screen printing or labeling.

Kaufman Container, 216/898-2000. www.kaufmancontainer.com



Glass bottles The Ronda Collection of flint glass bottles features both 15-mm crimp and Europa (threaded) finishes. The bottles are available in 30-, 50-, and 100-mL sizes with a tall version in a 100-mL size (crimp only). The circular-shaped bottles are perfect for perfumes and colognes and display prominently on the shelf, the co. says. The collection can be further enhanced with optional frosting, ceramic decorating and labeling, as well as a variety of closure choices.

O. Berk Co., 908/851-9500. www.OBERK.com



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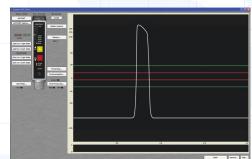
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Designed with on-the-go children in mind, Dole Squish'ems! are packed in standup pouches with resealable, safety caps. The pouches are designed for easy one-handed product delivery, which can encourage independent eating by young children.

Dole's healthy squeeze

Fruit puree in **RESEALABLE**, **SPOUTED POUCH** helps parents squeeze healthy snacking into hectic lifestyles

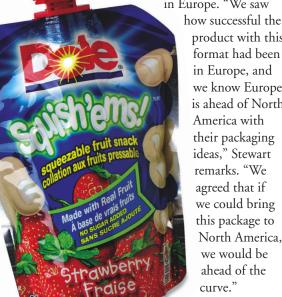
Linda Casey, Associate Editor

Peter Stewart, senior business development and sales strategy manager for Dole Packaged Foods Canada, Markham, Ontario, has a solution for any parent who has ever had their child's snack become the backseat decor of their vehicle.

In June 2008, Dole Packaged Foods Canada launched Squish'ems! The fruit puree is packed in Cheer Pack spouted pouches from CDF Corp. The spout is wide enough to allow the puree to dispense freely, but it is narrow enough to prevent the puree from spilling easily from the package. The pouches also have a resealable cap.

The Dole team was inspired by a similar product delivery system used for apple sauce

in Europe. "We saw



product with this format had been in Europe, and we know Europe is ahead of North America with their packaging ideas," Stewart remarks. "We agreed that if we could bring this package to North America, we would be ahead of the

The problem with being ahead of the curve often is that a roadmap to implementation has not yet been drawn.

Path to market

We saw the European packaging about two and a half years before we actually ended up launching the product," Stewart comments. "It's been a long, tortured path to the market. When we started this project there were I think two machines in all of North America that could do this."

The Dole team found a copacker in upstate New York that was set up to work with the spouted pouches. "But it was a small company, and they eventually went out of business," Stewart recalls.

At this time, Stephen Fairfield was consulting for a state-of-the-art form/fill/seal facility in Mississauga, Ontario, which was suffering with poor sales. Recognizing an opportunity, Fairfield and a investment partner incorporated Eco-Container Corp. (ECC), and they began negotiating the purchase of the business.

ECC then began talks with Dole regarding the Squish'ems! project. Specifically, Dole wanted to know if the facility ECC would be purchasing could fill fruit puree into Cheer Pack pouches.

"As it happened, the negotiation for the facility went south," Fairfield remarks. "We had a production contract done and signed with Dole, and no place to put the equipment, and the clock was ticking for the launch target date."

Packaging operation built on demand

Eager to get the Squish-ems! product to market, Dole Canada then enlisted the help of the

packaging manufacturer CDF Corp. "Dole led us to Eco-Container and said, 'Talk to them about doing the copacking and everybody kind of rolled up their sleeves and got it done," recalls Steve Gosling, CDF Corp., director of sales for Cheer Pack North America.

The companies identified the packaging machinery, including CHP40 fillers from **Gualapack S.p.A**, that would be the best fit for the packaging application. ECC then created a new copacking business model that would ensure that the new operation would be sufficiently capitalized.

"Our business model is to go into an existing facility that has the trained staff, and infrastructure, QC, logistics, accounting departments, etc. and we fund and maintain the equipment" Fairfield explains. "The facility's owner has the advantage of no capital expense or ongoing maintenance costs, and secures a better asset utilization. ECC covers the variable costs of running the equipment and provides a simple profit allocation.

"And the investment bankers like the model as the entry cost is lower, which in turn provides for a competitive costing to the trade—so, it's a good financial model," Fairfield adds.

Fillers perform like little tanks

Canadian grown and processed apple sauce, which is the main ingredient in all Squish'ems! varieties currently on the market, arrives at the copacking facility in large totes. The apple sauce is mixed with the other fruit-based ingredients according to Dole's recipes.

After mixing, the purees are heat-treated in a simple steam injection, tube-in-tube pasteurizer



that has been modified with a heat exchanger to control the steam. Quality-control checks are conducted at a minimum of every half hour. Often, these checks are done every 15 minutes.

From the pasteurizer, the purees go into two separate, but synchronized CHP40 fillers. "They're well built, fairly simple in design and solid," says Fairfield. "Depending on fill amounts, and pouch capacity, each filler can run between 40 and 44 pouches per minute, with larger pouches easily accommodated with minimal adjustment or downtime. The model is calculated to deliver an 83-percent production efficiency on a 24-hour shift, resulting in close to 96,000 pouches or approximately 8,500 kg of puree.



Before packing pouches into cartons using a special inserting pattern, workers straighten the pouches. This improves pouch presentation in the cartons' windows.

"The Gualapack fillers can handle a wide range of viscosities," he adds. "Fruit piece identity is possible, though it is limited to a fairly small size in order to clear the valving and fit through the pouch's neck."

Pouches arrive at the copacking facility preloaded onto rails, which enables quick loading into the filler's magazines. All Cheer Pack pouches are vacuum-checked by the converter before delivery to a packaging operation. Evacuating the air from the packaging also enables the fillers to quickly push product into the pouches.

After the pouches are filled and sealed, they travel to a post-fill steam tunnel where they receive a second heat treatment to more than 90 deg C to further en-

sure product safety. The pouches exit the steam tunnel and then are dropped into a cooling bath, where they are cooled to a range between 30 and 35 deg C. In the drying chamber, the cooled pouches are dried by air knives. All machinery is from Gualapack.

Each pouch is coded by a **Leibinger** printer with the date, time and filler information. Coded and cooled pouches are conveyed to manual pack-out area, where personnel manually shape the packaging to provide the smoothest appearance possible. The pouches then are packed according to a specific insertion plan into brightly printed paperboard cartons manufactured by **Cascades**, which also supplied the case former and sealer.

Dole considers the flexible packaging as a competitive advantage, and it didn't want the secondary packaging to prevent prospective consumers from being able to interact with the pouches when the product was on store shelves.

"We wanted a window so people could poke it and feel it and touch it," Stewart recalls. "The problem is that when you open up a carton, the window allows the product to move around. And it doesn't present itself well within that window."

Working with Cascades, Dole developed a final carton design and an insertion plan to ensure that product would remain secure in the carton and the pouches would display nicely through the secondary packaging's window.

Four pouches are inserted into each carton: Two with their caps up and the other two capdown. Packing line personnel then hand-pack 12 Squish'ems! cartons into a master shipping case.

Keeping the product and children safe

Engineered to have a 12-month shelf life, the Cheer Pack configuration used for Squish'ems! is a PET outer layer, laminated to aluminum with an inner sealant layer of PE.

The PET layer imparts a high-gloss finish, which shows off the eight-color gravure printing done on a **Cerutti** press by CDF partner **Hosokawa Yoko**.

The laminate structure also allows the product to be stored in a wide range of temperatures. The packages can withstand very cold temperatures, with some parents reporting success freezing the pouches. Yet, the same pouches are hot-filled during the packaging process.

Each pouch is sealed with a large-diameter, screw-on, safety cap from Gualapack. "This cap is Continued on page 26



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32 mm in diameter," Gosling explains. "This means it won't pass through the choke tube, therefore it's considered to be child-safe." According to Gosling, the cap meets the U.S. Consumer Product Safety Commission, Small Parts Regulations, 16 C.F.R. Part 1501 and 1500.50-53.

Explaining an additional safety feature to the cap, Stewart states, "If a child did happen to swallow it, it's made with enough venting and air holes that it wouldn't create a total blockage."

Gualapack was awarded U.S. patent D547, 657 S for the cap design.



Packed cartons are closed in preparation of sealing and case packing.

Single-serve fruit strategy

Squish'ems! is performing well as part of Dole Canada's single-serve fruit market strategy, of which products designed for children is a major component. The food processor plans to expand the product line in 2010, given the right economic conditions, with two new flavors—grape and cherry.

Other groups within Dole are evaluating the product for their regions. The U.S. group plans to develop a similar product that caters to sweeter taste preferences of American consumers.

More information is available:

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The benefits of serialization are almost limitless when it comes to retrieving data, maintaining consumer safety and establishing a brand identity.

Pharma safety net

Serialization places a unique mark on each level of packaging to provide TRACKING OF PHARMACEUTICALS.

Serialization has received a great deal of visibility recently, particularly given recent efforts in the U.S. and Europe to tighten up the supply chain to combat counterfeiting. This is an issue which is important in a wide variety of industries, but most especially in the pharmaceutical industry where counterfeiting and diversion can cause consumer safety issues, not to mention the burden of cost placed on developers when returns and recalls become necessary. Fortunately, new technologies based on package serialization have been developed to address issues such as counterfeiting and traceability. Serialization now provides brand owners with increased security and protection from counterfeiters and diverters, as well as supply chain efficiency, returns

management and innovative consumer education and marketing programs.

What does serialization mean?

Serialization refers to the assignment and placement of unique markings on a primary package. These markings can be a twodimensional or RSS bar code, a human-readable letter/number code or unique serialized codes that can be "written" onto a radio-frequency identification (RFID) tag/label. These unique codes are placed on each package when they are packaged using variable data printers or preprinted labels or cartons and then read by a vision system. These unique codes are uploaded to an event repository database that can be accessed by various

parties, including pharmacists, law enforcement officials and even consumers after the product is shipped and sold. The individual packages can be aggregated or electronically linked to a shipping case, and even to a pallet by putting unique codes on these other levels of packaging, thus creating a child/parent/grandparent relationship. As a result of this aggregation, if the bar code on a pallet is scanned at a warehouse, the brand owner or trading partner will have tracking information regarding all shipping containers and primary containers at that warehouse. Additionally, once ePedigree laws take effect, serialization and aggregation will provide the ability to track-andtrace products from the point of packaging to the pharmacy or healthcare facility.



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Governmental requirements

As safety concerns grow, regulatory agencies are beginning to take action. Agencies throughout the E.U. will be requiring the use of serialized 2D bar codes for pharmaceutical products beginning in 2010 (Turkey) and 2011 (France). These changes are not that far away for North America. California's ePedigree law, which requires a unique mark on each primary pharma package, takes effect in January 2015.

New federal legislation is expected to require serialization throughout the entire U.S. by that same year. Pharmaceutical companies need to start considering how to implement these important changes before these ensuing deadlines arrive.

An even lower level of serialization is now also attainable, allowing traceability down to the unit dose tablet or capsule. Several new technologies including high-magnification imaging and printing of unique codes on each tablet are available to uniquely identify each unit dose. These unique codes can

Individual packages can be electronically linked to a shipping case and a pallet with unique codes, creating a child/parent/grandparent relationship.

be linked to the primary package, providing a link from the tablet up to the pallet.

Using new specialty pharmacy distribution models, the supply chain involved in shipping a controlled substance could be transparent from manufacturer to patient if each tablet is uniquely coded and/or identified. With more than 15 million Americans nationwide abusing prescription medications, these new technologies enable pharmacy companies and law enforcement officials to identify sources and locations of drug diversion in which prescription drugs are purchased and sold through elicit channels.

Authentication

Another benefit of serializing down to the unit dose is to provide consumers with the ability to authenticate a product by inputting the unique identifying codes, using the Internet or a phone. Now,

authentication can take place at the primary package. Additionally, by 2010, these same methods will allow consumers to be able to scan a 2D bar code on a package with an iPhone to ensure that the product is legitimate.

Pharma companies lose significant amounts of money by taking back counterfeit product that is returned for a variety of allowable reasons, including recalls. Unfortunately, counterfeiters today have access to the latest digital printing technology, which enables them to virtually duplicate the packaging of authentic pharma products and ultimately steal millions from companies that aren't able to authenticate their products.

By placing a serialized code on each pharma package, a brand owner can be assured that a returned product is legitimate. Additionally, recalls can be announced and managed with more certainty, reducing consumer concerns and enhancing consumer safety while providing cost savings.

Clinical trial efficiency

Serialization also provides huge benefits for clinical trials. Trials can be conducted, reported and analyzed more efficiently if each of the unit doses being taken in the trial is serialized. This approach is especially Continued on page 30

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beneficial for double-blind trials, in which neither the patient nor clinicians are aware of whether the patient is being given a new drug or placebo. For example, if vials being administered to a patient group in a particular location are serialized with bar codes and aggregated to a carton or bundle, they can be scanned as they are administered to each patient and input into a database. Now, the results for each vial can be tracked throughout the course of the trial more

If serialized, medical devices and medical instruments can be protected from counterfeiting and gray-market diversion, allowing them to be recalled more easily.

efficiently, providing necessary data regarding the outcome.

Works with medical devices

In addition to pharmaceuticals, the healthcare industry can benefit from serialization of medical devices



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as well. If serialized, medical devices and medical instruments can be protected from counterfeiting and gray-market diversion, allowing them to be recalled and/or serviced more efficiently if a unique code is placed on each product. Brand owners of orthopedic devices and implants can be protected from potential liability issues, which result from counterfeit versions of their products being used in surgical procedures when proper serialization procedures are in place.

A marketing tool

There are also added benefits to utilizing a serialization protocol. By placing a unique human readable code on each primary package or the product itself, brand owners can establish a valuable link to the ultimate consumer or end user of the product. Using a program similar to coupons, consumers can redeem an electronic coupon using the unique package code.

This link between the brand owner and the consumer can be used for creative brand loyalty programs, and can provide an invaluable source of metadata. Promotional contests could be implemented and information about the pharma product could be retrieved when each consumer is required to register in order to receive the education or promotional benefit.

Keeping ahead of the regulations

The benefits of serialization are almost limitless when it comes to retrieving data, maintaining consumer safety and establishing brand integrity. These benefits extend not just to pharmaceutical and healthcare sectors but to a wide variety of other industries as well.

But most importantly, pharma and medical device companies can reap the benefits of serialization well in advance of being forced to by government regulations. This is a change that will provide a wide array of benefits for all of those involved.

Steve Wood is president and CEO of Pharmorx Security Inc. (www.pharmorx. com). For more information, e-mail info@pharmorx.com.



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This six-head rotary capper is specifically designed for pharmaceutical applications. It is completely lube free and features quick, toolless changeover for cap and bottle handling parts.

Jack Mans, Plant Operations Editor

Winners New cappers increase productivity, while reducing downtime and scrap at SANDOZ, INC.

Sophisticated, new cappers at Sandoz, Inc., Broomfield, CO, are paying big dividends for the U.S.'s largest manufacturer of generic pharmaceutical products. Sandoz, which manufactures more than 200 products in more than 500 package sizes, has two U.S. manufacturing plants, but Broomfield is its primary facility.

Three years ago, Sandoz installed an eighthead rotary capper from **Fowler Products Co.** that worked very well. When the company decided last year to further upgrade its packaging operations, it reviewed the cappers on the market

and then purchased a new Fowler CAS-6/360 sixhead rotary capper.

"We've used a number of different cappers, but we like the Fowler machines the best," says packaging development

manager Mark Kuhl. "They are built like a tank, and Fowler has done a great job integrating U.S. components onto the base European machine. They have reduced downtime and increased productivity because they produce less scrap and are much quicker to change from one bottle to another. We couldn't be happier."

Says Kuhl, "We had several lowspeed lines, and we needed to increase productivity, so we rebuilt our filling room and purchased the second Fowler capper along with a new

desiccant dispenser and tablet counter. We modified an existing bottle orienter and installed existing downstream equipment including a labeler and case packer. The new line runs 120 bottles of tablets per min ranging in capacity from 125 to 250 cc."

To start the operation, HDPE bottles, which are supplied by **Berry Plastics Corp.**, are oriented by a machine from **Omega Design Corp.** As part of the process, the machine blows them out with ionized air. The bottles are then conveyed to an intermittent motion desiccant dispenser from **Jushay Corp.** The desiccant pouches are supplied on a roll by

The cappers reduced downtime and increased productivity because they produce less scrap and are quicker to change over.

Sud-Chemie Inc., and the dispenser cuts them apart and drops them into the bottles on the conveyor below.

Vibratory-feed tablet counter

Next, the bottles are conveyed to an intermittent-motion SwiftPharm vibratory-feed tablet counter from **IMA Nova** that fills four bottles at a time. The bottles are metered into the machine through a feed screw, and the machine controller allows four bottles to enter the machine





A new packaging line, top, combined existing equipment with a new vibratory-feed tablet counter and rotary capper. Bottom, the rotating cap-transfer starwheel picks the caps from the and the capping heads descend and pick up the caps for application to the bottles.

for each bottle filling cycle, after which the feed screw stops.

The tablets to be filled are dumped into a 500-kg-capacity bin that is then lifted to the top of the tablet feeder by a column lift. The bin pivots and discharges the tablets into the feeder hopper through a butterfly valve. This unit is supplied by **Custom Powder Systems LLC**.

From the hopper, the tablets are delivered to the bottles through 12 channels on three sets of vibrating trays in series. The trays are divided into four segments across the machine with each segment having three vibrating channels. Each of the three-channel segments handles tablets for one bottle.

The purpose of the three trays in series is to spread the tablets out so that they are separated by the time they drop from the last tray so they can be counted, which is done by photo arrays at the end of each channel. The number of tablets being delivered from the feed hopper is adjusted manually to satisfy the requirements of the bottles being run by adjusting the amplitude of the vibration on the first tray beneath the hopper.

The quantity is then fine-tuned by a controller on each channel that automatically adjusts the amplitude of the tray vibration during the operation to deliver more or fewer tablets based on the tablet count at the end of that channel.

Ultimately, individual tablets drop off the ends of the 12 channels into 12 chambers called precount gates. From

these, the tablets drop into four more chambers called catch boxes, each of which receives tablets from three precount gates. When a catch box has the number of tablets required to fill the bottle, based on the count from the photo array, a gate above the box closes and a gate beneath the box opens and discharges the tablets into the bottle on the conveyor below.

The purpose of the dual level of

accumulation chambers is to ensure that vibrating trays never have to stop. Thus, the precount chambers accumulate tablets while the catch box is discharging to the bottles. When this is finished, the tablets in the precount gate drop into the catch box, and subsequent tablets fall through the precount gate without stopping.

When all four bottles are filled, they are released and four more

bottles enter the unit.

"We are very pleased with this tablet feeder," says Kuhl. "Running different products can be tricky, and there is definitely a learning curve involved, but the self-correcting feature for the tray vibration helps the operation."

Six-head capper

Bottles leaving the tablet Continued on page 34



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counter are conveyed to the Fowler Model CAS-6/360 sixhead rotary capper mentioned previously. Bottles are metered into the continuous-motion capper through a feed screw and then travel around a star wheel into the center starwheel, which transports them around the capper.

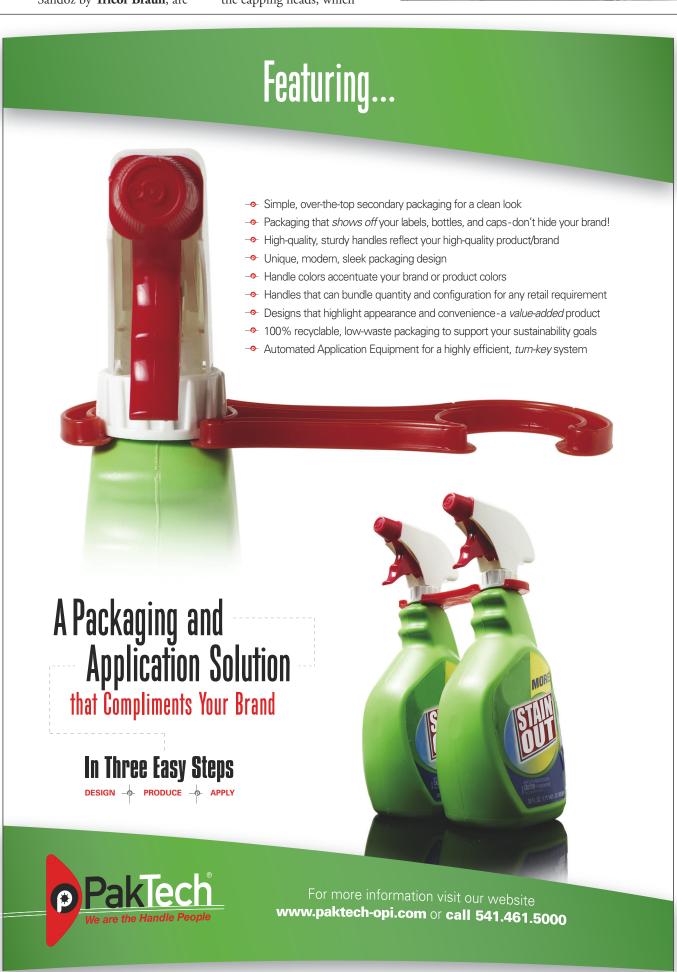
Caps, which are made by Rexam PLC and distributed to Sandoz by Tricor Braun, are

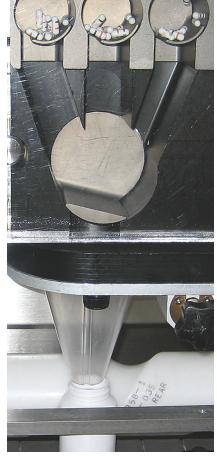
loaded into a floor hopper and lifted up to the overhead cap hopper by a cleated elevator. The caps drop into a rotary sorter that orients them in an open-side down configuration and delivers them into the cap track where they travel down into the capper.

A rotating cap-transfer starwheel picks the caps from the end of the cap track and the capping heads, which









Intermittent-motion vibratory-feed tablet counter, above left, fills four bottles at a time. Photo arrays count the tablets as they drop off the ends of 12 vibrating channels and pass through two sets of accumulation chambers, above, as part of the counting process.

are equipped with hysteresis-magnet chucks, descend and pick up the caps with three-segment jaws.

The heads descend onto the bottles and the chucks rotate to tighten the caps to the set torque, after which the jaws open, the heads rise and the bottles exit the machine through a starwheel.

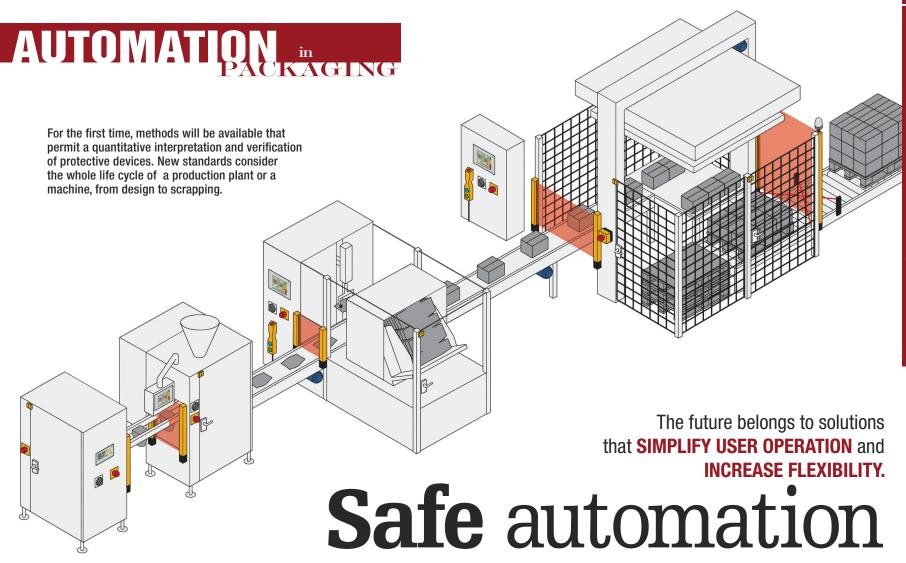
The capper at Sandoz, which is specifically designed for pharmaceutical applications, is lube free and features quick, toolless changeover for cap and bottle handling parts.

Bottles are then conveyed to the downstream equipment.

More information is available:

Berry Plastics Corp., 812/424-2904. www.berryplastics.com. Custom Powder Systems, 417-868-8002. www.custom-powder.com. Fowler Products Co., 706/549-3300. www.fowlerproducts.com. IMA Nova, 978/537-8534. www.novaps.com. Jushay Corp., 716/662-8215. www.jushay.com. Omega Design Corp., 610/363-6555. www.omegadesign.com. Rexam PLC, 812/867-6671. www.rexam.com. Sud-Chemie, Inc., 502/634-7200. www.sud-chemie.com. TricorBraun, 800/325-7782.

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The challenges facing safe automation are reflected in the trends. The market wants overall, compatible solutions from the sensor to the actuator. Ethernet is gaining ground as a universal communication system. As a result, the worlds of information technology and automation are growing closer together, which brings new challenges not just for safety, but for security, too.

The trend is moving away from exclusively centralized control structures toward decentralized, independent cell automation and the mechatronic, modular approach that this enables. However, networking several control systems must not increase the level of complexity. The future belongs to solutions that simplify user operation, while significantly increasing the level of flexibility.

Along with the ongoing technological development, standards also have a key role to play—a fact that is also reflected in the trends.

There are currently a whole range of standards and directives on machinery safety that are entirely new or are due to replace existing editions. The two most important changes are the new Machinery Directive (2006/42/EC), which will come into force on Dec. 29, 2009, and EN ISO 13849-1, which will replace EN 954-1. To that, you can add DIN EN 62061 as a sector standard of DIN EN 61508. The general expectation is that the conversion process will not make the safety solution any easier for users.

For the first time, methods will be available that permit a quantitative interpretation and verification of all the protective devices. Manufacturers need to design products with

this in mind. Users need to see this change as an opportunity and try to promote active implementation.

The new standards essentially consider the whole life cycle of a plant or machine, from design to scrapping. A quantitative assessment also provides a method by which to calculate each impact chain universally, from the sensor to the actuator, and to compare this with the requirements established from the risk analysis. As manufacturers, it's vital to be represented in each segment of this chain and be able to

Intelligent dovetailing of safety and standard control technologies considers the various requirements of both environments in equal measure.

offer users compatible solutions. This way, it's possible to reduce the complexity and the interface investment for the user.

Solutions must support users

The future belongs to systemic solutions that support users from engineering to maintenance, which dovetails process control and safety within automation. Intelligent dovetailing of safety and standard control technologies considers the various requirements of both environments in equal measure. The requirement for short reaction times and the absence of feedback can only be implemented if the development has taken both environments into account right from the outset. Accordingly, the benefits are on the side of combined systems designed along these lines.

Merging safe motion into drive

A further trend in this respect is safe motion, in other words, the integration of safety into drive technology. The integration of safety functions will continue to grow in this area, offering users all-in-one solutions. However, products and systems will only be one side of the coin. Services that support users with targeted expertise specific to their application will continue to grow in importance, particularly when you consider that this allows companies to concentrate on their core competencies and place safety as a company value into competent hands.

In terms of networking and data transfer, office communication is starting to penetrate the world of automation with Ethernet. This is following a similar development to that of the standard fieldbus systems where a safety layer is being added to existing protocols retrospectively. Those systems in which specific properties and requirements of feedback-free, high performance safety technology have been considered from the start are following a different route.

The merging of office and automation means that aspects of security and availability will Continued on page 36

have to become more important, particularly with regard to the open interfaces on an Ethernet system and the industrial use of wireless systems. This requires that automation be examined in its entirety in terms of safety and security.

Decentralizing controls

The decentralization of control functionalities will also continue to progress, whereby it's important

to distinguish between two different aspects. As a first step, the decentralization of periphery enables you to reduce the amount of wiring needed as well as associated costs. As a second step, it's possible to decentralize identical control programs and subfunctions that enable complete modularization in the form of machine elements. The aim is to be able to reuse as many identical parts as possible.

This way it is easier to standardize automation projects. This principle is already used successfully in mechanics and on components close to the hardware level, although decentralization of control technology still has shortcomings.

The centralized perspective

Today's solutions for networking multiple control systems bring with them a considerably higher level of complexity for the user. In this case, we believe that the solutions that become established will be those that make it easier for users to handle networking of multiple control systems and avoid interface problems right from the start. In an ideal scenario, the dividing limits in the mechanics, hardware and control software will remain the same. The benefit of this distributed control concept is that the user maintains a centralized perspective of a distributed control system.

An evaluative assessment of the overall life cycle of plant and machinery requires all the relevant project phases to be reproduced via modern, software-based tools from the proposal phase right through to commissioning. This guarantees the availability of subtotals and individual work steps for subsequent tasks, and fewer discrepancies in information.

Furthermore, it can be said that software tools that simplify the use of programming or configuration of products are increasingly becoming the distinguishing feature on hardware, as it is now more difficult to distinguish between the technical properties than it was in the past.

Software solutions

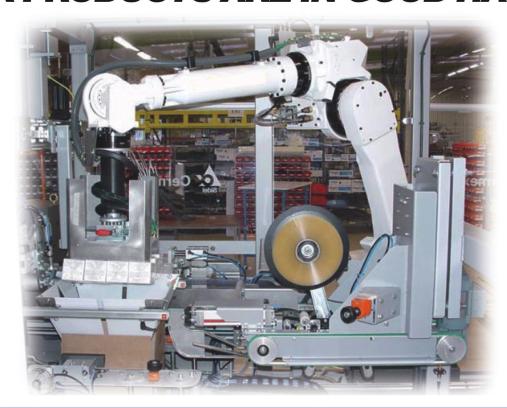
Where units used to be interconnected using a variety of wiring methods, today the trend is toward user-friendly software solutions. With a greater function range and therefore increased complexity, the aim is to simplify engineering and servicing through excellent diagnostics. For tools to be useful, they must work intuitively and guide users through a project without restricting them in any way.

Previously, safe automation has been characterized by a physical separation between people and a hazardous movement, for example. If access was required, the process was transferred to a safe condition using switching sensors (safety gate switches). This is now a proven procedure based on simple, robust principles. But having to regularly stop and restart the production process is also a disadvantage. New technologies resulting from image processing open up a range of possibilities for optimizing human/ machine interaction and create the potential for higher productivity and cost-effectiveness.

This article was written by Armin Glaser, head of product management for Pilz Automation. For more information, visit www.pilz.com.



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AGVs soup up drinkmaker

New automated guided carts at a major carbonated-beverage producer **COST HALF OF TYPICAL AUTOMATED GUIDED VEHICLES** and yield major benefits.



Jack Mans,Plant Operations Editor

Unique, new automatic guided vehicles (AGVs) with advanced-automation features are having a major impact at a new distribution center built by a major carbonated-beverages producer in the southeastern part of the U.S. The center incorporates a dynamic new line of AGVs from America in Motion Inc. (AIM) that are actually automatic guided carts (AGCs). The AGCs consist of a standard burden-carrier base with an adaptable top to which different load-handling devices, such as roller decks or lifting forks, can be added.

The AGCs have onboard battery systems that can power the cart for up to eight hours and, with opportunity charging, can fully recharge in as little as five minutes. The AGC system also features RFID technology onboard.

However, the newest significant concepts from AIM are complete control systems from **Beckhoff**



A pendant-mounted panel PC handles a broad range of functionality, including routing and traffic management, as well as overall system logic for the AGCs. Automation, LLC. "The new AGCs are easier for end users to integrate and cost about half as much as traditional AGVs, making the technology attainable for far more applications than previously possible," says Tommy Hessler, CEO of America in Motion. "It's quite easy to add or remove capacity based on the type of load the AGC must handle due to the modular structure of the Beckhoff controls.

"We looked into some other manufacturers, but we selected the AIM AGCs because AIM listened to our requirements and designed a system around them, instead of trying to sell standard products and workarounds that met our needs halfway. AIM also helped us develop true solutions, not just simple products," says the beverage company's project manager Derek Clever. "The beverage industry continues to grow in complexity with proliferation of new categories and multiple SKUs. This impacts the overall capacity, increases the strain on the logistics network and represents a constant struggle to contain costs. AIM's system capabilities address each

one of these challenges and increases productivity, consistency and velocity while reducing complexity."

Integrated intelligence

"The Beckhoff controls have allowed AIM to integrate intelligence into the vehicle," notes Theresa Blasius, vp of engineering at AIM. "Our AGCs can be best utilized in applications that already have some automation control, such as robot cells or automatic conveyor systems with a PLC. Via OPC (open connectivity via open Continued on page 38







Embedded PCs are the controls centerpiece onboard the automated guided carts. They are directly connected to the bus-terminal I/O modules and to the safety terminals.

standards), these types of controllers can easily command our AGC to carry the load anywhere in the facility.

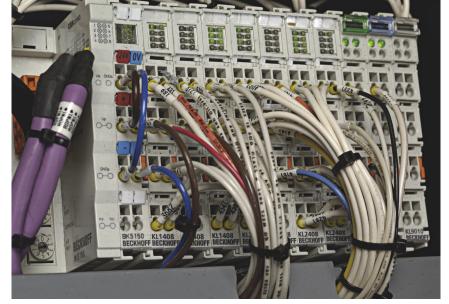
"The AIM system improves quality, reliability and efficiency by automating the repetitive and laborintensive order-building process, which virtually eliminates human picking errors," says Clever. "Also, the system's productivity can increase capacity as the business grows, with minimal

additions to financial or human capital. The Beckhoff components were key components adding to the flexibility of the AIM system."

Voice-activated commands

"We considered a non-PC-based approach, but decided against it, since we needed the ability to run our C# programs onboard, and we decided to make full use of the

If you want connectivity that is... Simple. Easy to install and easy to use. Cost-effective solutions get your application running with unlimited Technical Support that keeps it running. Seamless Reliable, field-proven solutions that allow connectivity between diverse networks and controllers Put **ProSoft** Protocol Interfaces ProSoft Technology® is your single source for protocol interface solutions including Modbus, PROFIBUS, HART and many more. Wireless Technology Save on cabling costs and improve operational efficiencies with ProSoft Technology's wide range of wireless solutions +1-661-716-5100



The automated guided carts utilize bus-terminal I/O onboard the AGCs and in a distributed fashion near the operator stations.

features that Windows CE offers for our applications," Hessler adds. "This way, we can integrate voice-activated commands, which is much easier with the open Beckhoff system than with our competitors' closed alternatives."

The new AGCs are designed to fully utilize Beckhoff products that are based on familiar off-the-shelf technologies for leading-edge performance with user-friendly controls. "No closed, proprietary controls are found in any of our AGCs," Hessler says. "We want our customers to have the ability to easily handle AGC maintenance if desired." AIM uses the Beckhoff CP7202 panel PC with its 15-in. touchscreen as an all-in-one system controller and user interface.

Installed in a central location as a fixed AGC operator station, the

safety devices, can communicate over multiple, standard field buses and can be used alongside regular bus-terminal I/O with almost no restrictions.

AIM also installs distributed Beckhoff I/O near the panel PC stations and utilizes wireless local area network (WLAN) communication between the panel PC and the CX1010 onboard the AGCs.

Multiple PCs

"The CX1010 with a 500 megahertz Pentium® MMX (single instruction set)-compatible processor is our standard AGC controller, but we sometimes use the one gigahertz CX1020, when more central-processing unit horsepower is required, such as for weighing and scanning of products," Hessler says. "It's quite helpful that the CX

The AGC system improves quality, reliability and efficiency by automating the repetitive and labor-intensive order-building process.

CP7202 handles a broad range of functionality, including routing and traffic management, overall system logic for the AGCs and I/O data from stationary devices, such as the AGC battery chargers, load stands or other machinery. Other functions include traffic management, vehicle-selection optimization, vehicle-task management, load tracking, path-programming logic and AGC fault finding and diagnostics.

Onboard, the AGCs are equipped with CX1010 embedded PCs, which function as programmable-automation controllers. The CX1010 devices are directly connected to Beckhoff bus-terminal I/O modules and TwinSAFE terminals for streamlined implementation of safety devices on the AGCs. TwinSAFE terminals do not require a dedicated safety PLC, which greatly reduces hard wiring of

family of PCs can scale up in power whenever a processing boost is needed."

The onboard CX1010 embedded PC handles all internal functions required for the AGC to operate, partly using TwinCAT PLC software from Beckhoff and partly through C# software developed by AIM.

The major functions are guidance (magnetic tape or wire), routing via RFID, charging, steering control, drive control and precision stop, manual control via pendant, automatic load handling and safety devices that are managed by TwinSAFE.

"TwinSAFE technology helps AIM maintain a competitive advantage by easily and cost-effectively integrating emergency stops and bumper stops into the AGCs," Blasius says. "We completely adhere to global safety

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standards and can include features that our competitors can't yet touch. Traditional safety methods are far more complicated and expensive; so much so that some of our competitors forego comparable safety functions entirely."

AIM also uses OPC for communication between its AGC system and other PLC-controlled equipment, such as conveyor systems and robotic controllers. A TwinCAT OPC server helps AIM easily integrate its AGC systems with other material-handling products, while facilitating streamlined system communications.

Short commissioning time

Throughout the project, AIM worked extensively with Beckhoff technical support in the U.S. headquarters, as well as Beckhoff's Windows CE development team in Verl, Germany. "Beckhoff technical support was instrumental to our success, with rapid resolution of technical questions," Hessler says.

"The new AGCs containing the complete Beckhoff control system have run flawlessly in production mode," Hessler continues. "With our new design running in the field since August 2008, we have determined that AGC reliability has been superb and system uptime has been maximized for our customers."

Commissioning of a traditional AGV, including installation, testing and acceptance, is typically a two- or three-week project. "AIM



Using onboard technology, the automated guided carts feature integrated emergency stops and bumper stops. The safety terminals do not require a dedicated safety PLC, which greatly reduces hard wiring of the devices,

successfully completed the commissioning of the new Beckhoff-controlled AGC in only four days," Hessler says.

Another tangible difference is with the programming. "Utilizing the Beckhoff embedded PC with Windows CE environment, AIM has been able to quickly integrate with our other equipment to create the total solution. This system is the perfect merger of reliable PLC control with IPC (Assn. Connecting Electronics Industries) sophistication," Blasius says. "We have also implemented remote access for customer service and support using the CP7202. This saves AIM a

great amount of engineering time and expense that would otherwise be spent for onsite-support visits."

AIM intends to continue moving AGV technology forward using PC-based and industrial Ethernet technologies. "To serve our customers even better, we plan to implement EtherCAT I/O terminals and expanded WLAN capabilities," Blasius says. "We don't think there are any serious alternatives to Beckhoff, considering the available tools from Windows CE to .NET framework to the open PC-based architectures."

Adds Clever, "The AIM system has the capability to produce orders in real time, identifying each case on every pallet and generating advanced shipping notices that lead to order visibility throughout the entire distribution system. This ultimately improves customer service. The system improves quality, reliability and efficiency by automating the repetitive and laborintensive order-building process, which virtually eliminates human picking errors. Also, the system's productivity can increase capacity as the business grows, with minimal additions to financial or human capital."

More information is available:

America In Motion Inc., 704/246-3961. www.weareaim.com.
Beckhoff Automation LLC, 952/890-0000. www.beckhoffautomation.com.



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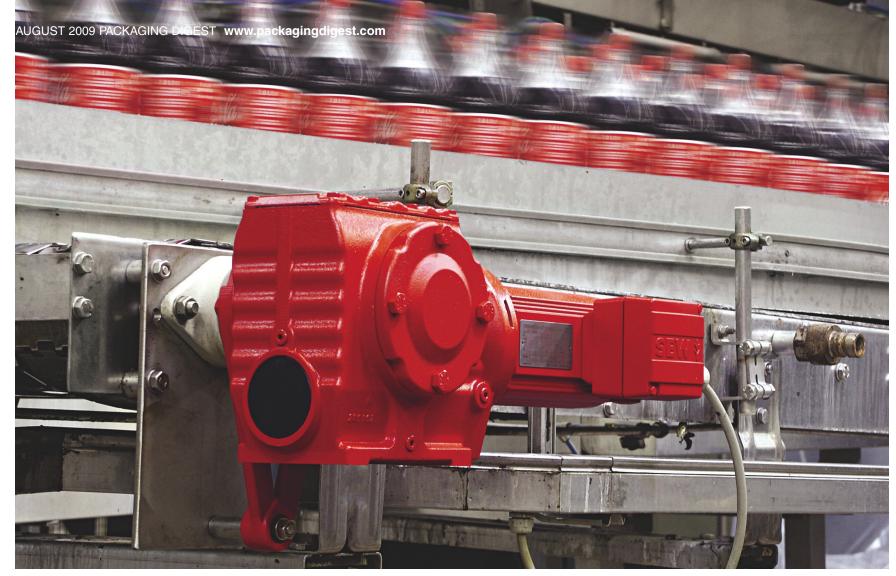


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Machine designers are addressing a number of considerations, including life cycles, to achieve true machine flexibility without new capital investments for every package format.

Silver bullet Building in a high degree of flexibility is a key element for OEMs in the DESIGN OF PACKAGING EQUIPMENT.

Jeanine Katzel, Renee Robbins Control Engineering Magazine

As machine builders look to their packaging customers for keys to future designs, the need to switch products without investing in new equipment and better machine diagnostics are becoming important trends. For most packaging machinery OEMs, there are two key issues: Low cost and high flexibility. Much depends on what the budget will allow, and how creative OEMs can be.

Geoff Clippinger, industry manager for the Food and Beverage Center of Competence for Siemens Energy & Automation Inc., says, "Packaging requirements are changing everyday, because companies are constantly releasing new products. They don't always need equipment that can handle a rapid changeover, but they do need flexible machines that can accommodate new products."

Ben Green, packaging industry consultant for the Motion Control Solutions group at Siemens, contends that OEMs today are striving to develop a "silver bullet:" A machine that lets users "switch from one product to another and not have to make a new capital investment every time packaging formats change."

To achieve such capability, machine designers are addressing a number of considerations, including machine life cycles. Mike Wagner,

Rockwell Automation's global business manager for packaging OEM solutions, says, "Today, we have vertical form/fill/seal machines that put potato chips in a bag of any size. Linear motors are used to drive the equipment; and the machine can be changed on-the-fly to run another bag size. You don't need another machine or even an upgrade every time you launch another product."

Wagner says that by designing this kind of flexibility into machines, OEMs are achieving an internal cost savings. "If they can build a machine that's more flexible, they don't have to redesign it so frequently—and that is related to sustainability and lower cost," he adds.

OEMs also are looking at designing equipment with new ways to maintain it and to keep it running at full efficiency, says Wagner. Beyond taking the obvious steps to control losses such as air leaks, he says, "they are making sure that when a bearing goes bad, it can be easily identified and replaced. They are building onboard vibration analysis tools to measure component performance."

Many systems already have these features and capabilities, adds Doug Burns, practice lead for sustainable production at Rockwell Automation.

Predictive maintenance, online parts ordering, energy monitoring systems—these information metrics used to reside only at the plant level. But they are moving to the operator level or machine level.

Doug Burns, practice lead for sustainable



Bringing the package and the machine together is one trend OEMs see happening that could revolutionize equipment design. Information metrics are moving from the plant level to the operator or the machine.

production at Rockwell Automation says that packaging machines already include controllers that can, for example, help optimize temperature loops and setpoints to minimize the energy needed for shrink wrapping. It's one of several things in



Most machine OEMs are looking at designing new equipment with new ways to maintain it and keep it running at peak efficiency. Meeting such goals depends on what the budget will allow and the OEM's creativity.

existing controller platforms that many machine builders and end users can—but typically haven't yet—tapped into to drive efficiency.

Merging package and machine

The big trend, adds Wagner, is to bring the package and the machine together. "Predictive maintenance, online parts ordering, energy monitoring systems—these information metrics used to reside only at the plant level. But they're moving to the operator level or the machine level. When that occurs, we are likely to see some revolutionary things happening."

These things could include better machine diagnostics that improve information about what is happening and what might go wrong, and other ways to maintain productivity.

For example, "a lot of electronic equipment contains memory cards now," explains Siemens' Clippinger. "If a part fails, you just pull the memory card out of the bad part, put it into the new part, put it back in place, and the machine is up and running again in five minutes. That can reduce downtime and maintain productivity."

The fact is, downtime costs money. And some contend that anything that reduces downtime

If they can build a machine that's more flexible, they don't have to redesign it so frequently—and that is related to sustainability and lower cost. costs is the real silver bullet for packaging machine makers and their customers, especially given the current world economy.

"I'm not yet seeing these economic times drive [an increased interest in] efficiency," says Rich Mintz, product manager for **SEW Eurodrive,** a supplier of motion-control products to packaging OEMs. "Price is still the driver,"

Mintz says. "OEMs are still faced with keeping the costs of their machines as low as possible."

Mintz suggests machine buyers do a cost audit before specifying the next purchase. "Packagers should sit down with the OEM, review each component, and re-evaluate the most costly ones," he says.

More information is available:

Rockwell Automation Inc., 414/382-2000.

www.rockwellautomation.com. SEW Eurodrive Inc.,

864/439-8792.

www.seweurodrive.com. Siemens Energy & Automation Inc., 800/964-4114.

www.sea.siemens.com.





Inspection system gets **TOP MARKS** from Adkin Blue Ribbon Packing Co., which uses it to more precisely inspect cases of blueberries before they go out the door.

Lauren R. Hartman, Senior Editor

To Adkin Blue Ribbon Packing Co., its new x-ray inspection system could be called the "berries." Located in South Haven, MI, deep in prime blueberry growing country, the grower/packer of cultivated blueberries for fresh and frozen distribution is harvesting rewards since adding

the x-ray inspection equipment to its sorting and packing line. The equipment, a POWERx C600 x-ray system from from **Thermo Fisher Scientific,** helps Adkin prevent product contamination and ensure that its packaging is thoroughly inspected for defects.

One of the country's largest blueberry growers, Adkin farms 1,100 acres of blueberries and sells to bakery chains, foodservice and bagging customers and food processors.

Its frozen blueberry packing operation specializes in size grading according to customer needs. It has earned an excellent reputation in domestic and export channels and dependably supplies leading prepared food companies with a large volume

of product, while maintaining high quality standards. Adkin's fresh-pick operation harvests blueberries in July, August and September, and consists of hand-picking the berries daily, by the truckload. Adkin typically bulk-packs the fresh berries in 30-lb film-lined shipping cases but can also pack them in 5- and 10-lb cases, 2-lb plastic clamshells, and pint and



Cases of blueberries, above, exit the x-ray inspection system and are ready to be hand-palletized. The system detects metal, glass, stone and many other dense contaminants.

half-pint containers, depending on customer requirements. Because it's a berry packer, the company also buys berries from a select group of other domestic growers.

Only the best'll do

For Adkin, only berries in perfect condition, with the company's required level of quality, can

leave its plant for distribution. It strives to ensure that "no stone goes unturned" when it comes to berry inspection and sortation. With the growing demands of stringent food-safety standards and higher levels of contaminant detection and inspection capabilities required, Adkin's existing in-case metal detector just couldn't keep up in terms of detection sensitivity. If there are any packing problems or contamination, customers can be lost. "In fact, a customer can recall an entire batch if they find just one contaminant, which could be very costly for us," says general manager Tony Marr. "So the x-ray system can save us a lot of money.

With the cost of such a



A 15-in. LCD color touchscreen interface, above, displays or outlines potential problem areas. A color-coded button interface makes the system easy to use.

rejection so high, Adkin looked to Thermo Fisher for help finding tiny contaminants in the 30-lb cases of berries. After a series of trials with Thermo Fisher's metal-detection equipment in the wet and/or frozen production conditions, Adkin discovered that metal detection wasn't sensitive enough to meet its requirements. The fact that the blueberries are wet makes it more difficult for a

We now find a contaminant

100-percent faster

because we can see a picture of the defect on the touchscreen.

metal detector to find things like stainless steel.

"They then started investigating x-ray systems but were told by some customers that x-ray equipment probably wouldn't work either, remembers Thermo Fisher's Bob Ries, lead product manager for metal detection and x-ray inspection at Thermo Fisher Scientific. "But we all found out otherwise using the POWERx line."

Thermo Fisher then ran tests with Adkin's cases of berries and the POWERx x-ray system in its lab and was confident that the large-beam, high capacity POWERx could do the job, Ries says. "We tested their shipping cases in our lab and found

contaminants as small as one-point-five millimeters in size," he recalls. "The POWERx had to find two millimeters of metal inside a shipping case, which a lot of equipment can't find due to the size of the aperture and proximity of the coils to the product. The two-millimeter size contaminant was our hard and fast goal. Adkin installed a POWERx system at

their facility as a trial in late 2007, and it worked just fine, so they bought it."

Adkin was impressed by the level of sensitivity in the POWERx system. "The sensitivity levels on the system are much greater," affirms Marr. "The best we could detect with the previous metal detector was stainless-steel about four millimeters in size. Today, we can

detect contaminants as small 1.7 millimeters in size and that's what we needed."

Running up to 900 w of x-ray power, the POWERx has the ability to detect contaminants through shipping-case material and other upright packages such as pouches, cartons, cans and bottles. The system's x-ray beam works with Continued on page 44



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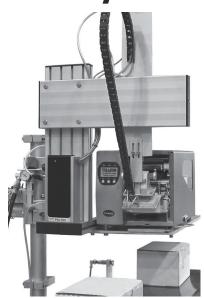
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Easy to use, the PA1200t requires minimal adjustment to changeover from applying product identification and bar code labels to the top or side of a product. The PA1200t/b was designed to apply labels to delicate products or products with curved or uneven surfaces. The Tamp Pad delivers the label right above the product and the label is blown the rest of the way on. The PA1200t and PA1200t/b can use a Zebra ZM400, Datamax I-Class or Tharo H-Series printer.

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packages measuring up to 15.75 in. wide and 10.04 in. high. A 15-in. color touchscreen LCD scanner interface displays or outlines potential problem areas and image-analysis software helps to optimize sensitivity and the probability of detection.

Designed with a color-coded button interface, image processing and analysis tools as well as system

functions that make it intuitive and easy to understand, the POWERx can create and save detailed records for traceability and process improvement, including information-rich images of any rejected product.

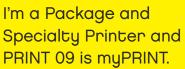
More than metal

But Marr says the key with x-ray technology in this case is



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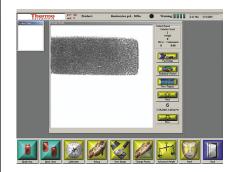
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Far shot of the berry-packing line, above, shows the netweigh filling and casepacking stations. The blueberries are then packed in film-lined 30-lb cases that are pre-assembled manually. Below, the system's display screen showing the contents of a shipping case. Adkin can now pinpoint smaller particles than ever.



that the 90-kV POWERx is able to detect more than metal. It can find other dense, foreign objects such as glass, stone and some plastics and improves detection where metallic packaging is used, which may impact the performance of other metal detectors. The system is also able to verify proper product assembly, presence/absence, counting, breakage and placement. In Adkin's case, it also finds berries on occasion that aren't ripe because they are denser than a ripe berry.

In Adkin's facility, the single-beam x-ray inspection unit is in place at the end of the berry-weighing/packing line, which runs about 12 to 15 cases/min, Marr says. Operators find the compact unit simple to use and operate and can react more rapidly to various types of problems that might crop up and eliminate unnecessary product rejects.

In production, after the berries arrive, they're inspected and put into a precooling system that lowers their temperature to 45 deg F, are air-cleaned, de-stemmed, de-stoned and washed, rinsed in a series of steps, "de-watered," as Marr put it, and sorted on an optical laser sorter from Best USA (www.bestnv.com). Next, the berries are conveyed to a visual-inspection station before being sized. They are then transferred to the packing room where they convey on Metzgar roller conveyors to be netweighed and case-packed a Lakewood



Shipping cases that have been filled with blueberries are tape-sealed, above, and then pass through the x-ray system, which automatically analyzes contents.

Process Machinery automatic case filler. The berries are deposited into film-lined cases that have been preassembled manually.

Sounding off

The filled cases are next tapesealed by a **Dekka Industries** BEL 150 unit before they pass through the x-ray machine for scanning and the computer-controlled unit analyzes the images created to detect contaminants automatically.

When running, the POWERx displays an intuitive red light/green light status monitor along with simple summary statistics onscreen. Warning lights alert line operators when the x-rays are turned on. The system can sound an alarm

Three things crucial to produce packaging:

- Food safety
- Appropriate packaging
- Quick harvest-to-packing turnaround

buzzer to reject a package before operators remove the case and analyze the image recorded. They can also rerun the case to verify the contaminant. If the detector continues to sound off, the case is put aside to rework or dispose of. If several cases are rejected, an entire lot could be in question, Ries explains.

Next, the cases are palletized by hand and the pallet loads are transferred onto refrigerated trucks. For frozen distribution, the case loads are sent to freezer storage for blast freezing in a separate building. The loads are rack-stored.

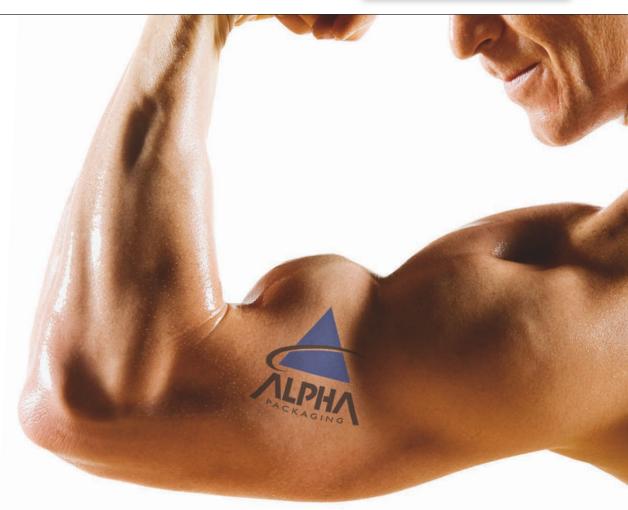
"The x-ray system has allowed us to cut downtime as far as locating defects inside the filled cases," Marr adds. "We can now find contaminants 100-percent faster because we can see a picture of the defect on the x-ray system's touchscreen. We saw a return on our equipment investment almost immediately, because we were able to trace really small contaminant particles embedded in the blueberries and could trace the crop back and put a stop to it," Marr says. "We'd buy another system if demand required it."

More information is available:

Thermo Fisher Scientific Inc., 800/227-8891. www.thermo.com. Best USA Inc., 720/870-2240. www.bestnv.com.

Dekka Industries, 604/278.7881. www.dekkaindustries.com.

Lakewood Process Machinery Co., 800/366-6705. www.lakewoodpm.com. Metzgar Conveyors, 616/784-0930. www.metzgarconveyors.com.



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Designed using computer imaging, the shampoo bottles, far left, stand upright while the conditioner bottles are inverted. The bottles are attractive yet economical.

Finessing a makeover

Lornamead updates the Finesse haircare line using **RAPID PROTOTYPING AND FUSED DEPOSITION MODELING** to generate bold designs to gain a strong brand presence without the price.

Lauren R. Hartman, Senior Editor

The Finesse® haircare line is back with new packaging and revved-up product formulations. A stylish redesign for the line, which relaunched in spring of 2009, is certainly taking hold, cleaning up in sales, according to figures from the first national store chain that took the new products, which posted double-digit sales increases.

Originally, Finesse was introduced by Helene Curtis in the early 1980s as a single, oil-free, self-adjusting conditioner for women 35 to 55, who may typically want more hair conditioning to guard against dryness, brittleness and the rigors of color treatments.

A bit like today, the decade of Big Hair was also a time of economic stress, and many women gave up salon visits to cut costs and care for their hair at home. The distinctive scent of Finesse, which many loyal users still remember today, and the conditioner's effectiveness, helped to make it an immediate success. Finesse soon expanded to include shampoo and styling products and became a dominant brand in the retail haircare market.

The original line's heyday lasted for years and went up and down in favor, as the economy improved and women returned to salons. But during that time, scads of other haircare products launched, and captured the eye of consumers.

Unilever then bought the line in 1996 through its acquisition of Helene Curtis, and changed both the packaging and the product formulation. But the brand somehow couldn't keep pace with the changing haircare market.

When U.K.-based Lornamead purchased the brand in 2006 with the specific intention of

reviving Finesse, the company planned to draw on the brand's key strengths and on the memories of users to draw them back, as well as give the product and its packaging 21st-century appeal to attract a new generation. The relaunch also has new formulations, but they're executed in a scent reminiscent of that in the original 1980s product.

In 2007, the company put the updated products onto retail shelves but they were still in the Unilever packaging. So Lornamead turned to bottle molder/designer **Silgan Plastics Corp.** to help develop new container designs and engaged **Little Big Brands** to create new branding and label graphics that would collectively project a dramatic new look and feeling. Silgan extrusion/

blown-molds four shampoo and four

conditioner bottles serving different hair types and a 13-oz HDPE bottles for a pair of two-in-one shampoo/ conditioner combination products. A larger 24-oz family size bottle using the same package design is also available. Styling products, including maximum-hold hairspray, volumizing mousse and extra-hold hairspray, come in 7- and 8.5-oz aerosol and nonaerosol containers.

FINESSE SELFADUSTING MOISTURIZING CONDITIONER Form Assends International Internationa

Our primary goal was to make the brand contemporary and eye-catching, giving it the impact of custom packaging.

Custom look at stock prices

"Our primary goal was to make the brand contemporary and eye-catching, and the packaging premium, giving it the impact of custom packaging," points out Karen Murabito, Lornamead group brand director. "But, given the current economy, we were also determined to control costs and maintain an affordable price point for consumers."

The distinctive 1980s bottle featured a slim design with a flared foot and silver graphics. The new structure would require close interaction between the decision makers at Lornamead and the Creative Services Group at Silgan. Silgan used 3-dimensional computer imaging and fused deposition modeling (FDM),

which gave the two groups a better idea of what the final bottle would look like, says Silgan's Creative Services group manager Stephen Kocis (see related article on p.

The designs began with three-dimensional drawings, Kocis explains, and early on,

54).

Original Finesse packaging, above, had a tall, slim look and flat sides. Lornamead wanted to retain the footed base.

Silgan developed 3D, FDM models for its own use.

An FDM printer operates much like an ink-jet printer, except that the "printhead" deposits plastic material instead of ink, Silgan explains.

Container models can be created in the printer's build area, and multiple models can be created at the same time. Models can be solid, hollow with a controllable wall thickness (which can mimic closely a finished bottle) or hollow with an internal honeycomb structure for strength (typically done with larger models).

Finalizing designs

As the designs became more finalized, the FDM models were used in presentations to Lornamead.

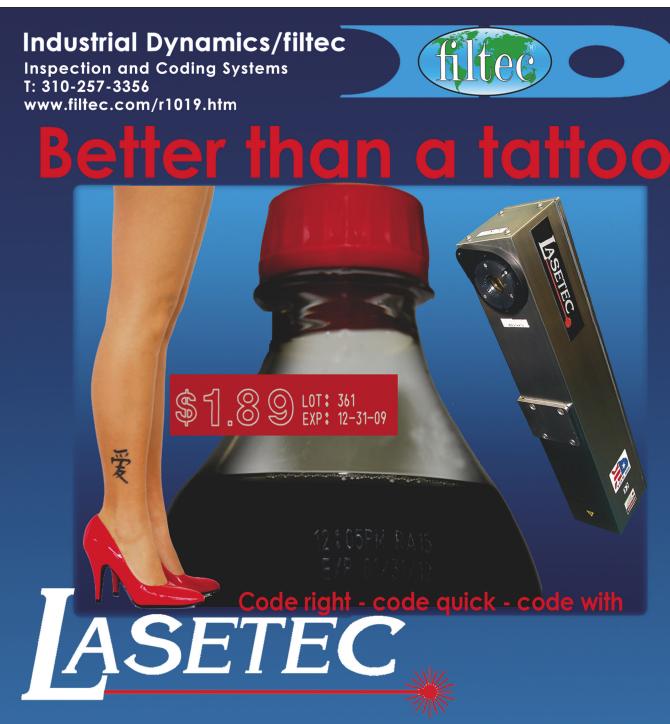
Kocis initially visited
Lornamead's offices in person
to present early designs and
gather input. From that point
on, the designs were exchanged
electronically until the FDM
models were created and represented
agreed-upon final versions. Kocis

Given the current economy, we were determined to control costs and maintain an affordable price point for consumers.

recalls that Creative Services began its design process by creating 3D CAD (Computer-Aided Designs) transmitted electronically utilizing

E-Drawing software manipulated onscreen. This allowed the Silgan designers and Lornamead to both see packages from any angle and Lornamead wouldn't have to install any extra software. The designers could then continue to refine the design, saving both time and money and cutting the time to market for the new products.

"Designs typically progress through multiple iterations," Kocis adds. "Being able to make new FDM models quickly and cost-effectively is Continued on page 48



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essential today."

The resulting bottles have a curvy, easy-grip oval shape, wide shoulders and large caps that complement the bottle shape so they can be used with two different bottle sizes. The caps provide bottle display both upright and in an inverted position. While the original bottle had a rounded shoulder and a small disc-top closure, Lornamead specified a wide, flat flipcap for the new bottle, which would reduce clogging and could allow the structure to easily stand inverted.

Rapid prototyping

Silgan has three FDM Dimension printers made by **Stratasys Inc.**, which also supplies the plastic used to model the prototypes. Creative Services makes an average of 900 models a year. FDM modeling was particularly important to the new Finesse project to achieve just the right physical shape of the bottle, Kocis says.

Silgan molds the bottles at its Ottawa, OH, facility. Silgan also provides a stock HDPE bottle for one of the styling products. The styling items include litho-printed steel cans from **Crown Cork & Seal** and aluminum cans that are dry-offset-printed by **CCL Container**.

Keeping the equity, not the cost

To keep costs in check, the same bottle shape is used upright for the shampoo as for the inverted conditioner. It was also decided, following cost comparisons, to use a stock closure supplied by **Arminak**



Silgan employs advanced design tools to create bottles that met the appearance requirements of Lornamead's project team. Fused deposition modeling is used for all custom and stock bottles. The FDM printers can create as many as 900 models a year.

Early sales indications give us evidence that the new packaging is going to make a dramatic difference in sales.

Associates rather than invest in two custom designs when the result was virtually the same.

Lornamead also wanted the new bottle to be lightweight and meet sustainability requirements. Lightweighting was achieved by lessening the fill (13 oz versus the previous 15 oz) and by switching to a monolayer HDPE construction instead of the former multilayer HDPE structure.

Icon simplified

Label graphics on the earlier Finesse bottles had been somewhat costly and difficult to print, points out John Nunziato, creative director of Little Big Brands. "Three different printing processes were used to achieve the final result on the different container substrates."

The original graphics, in Nunziato's words "had intricate layers and overlapping elements," and required multiple printing passes to lay down as many as six colors for one icon. "We wanted to keep the brand equity of the original icon, but not the cost" explains Pamela Long, Little Big Brands director of client services.

The brand icon was simplified to maintain the effect of motion associated with the brand's original pinwheel-shaped icon that conveyed how the products can spin to consistently keep hair beautiful.

The result is color coded according to product SKU and printed in a two-step process on pressure-sensitive polyolefin label stock. **National Label Co.** screen-





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- » Up to 1200 containers per hour
- » AP360 one label per container
- » AP362 two labels per container

Online video at www.primeralabel.com/APvideo



1-800-797-2772



Companion aerosol and nonaerosol styling products come in steel, aluminum and HDPE containers.

prints the logo in white type and in four-color process plus silver.

The trickiest part of the printing, Nunziato points out, was matching the exact color pinwheel with the color of the product identifier on the label. The logo was printed over a white background and the product identifier wasn't, so the identifier had to be printed directly on the transparent label film to appear as a slightly different color on the dark blue shampoo bottle than on the lighter blue conditioner bottle.

Different printing plates were made, and the color of the identifier was varied to match both HDPE bottle colors. The colors also had to be tweaked on the aluminum and steel cans to make them consistent across the entire line. The bottles are filled, labeled, cased-packed and shipped by Marietta Corp.

Less is more

Lornamead was able to get the new Finesse line on store shelves looking fresh and contemporary, at a reasonable cost, by cutting down on the print colors, using stock components and lightweighting the bottle.

The FDM technology also played a handsome role in submitting suitable container designs quickly.

Murabito notes that Lornamead is

extremely pleased with the new Finesse packaging, especially with the impact of its early sales figures. The new packaging began rolling out in the first quarter of 2009 to stores across the U.S., including Walgreens, Target and Walmart, among others.

"This gives us evidence that the new packaging is going to make a dramatic difference in sales," she says.

More information is available:

Silgan Plastics Corp., 800/274-5426. www.silganplastics.com. Arminak Associates Inc., 626/358-4804. www.arminak-associates.com.

CCL Container, 724/981-4420.

www.cclcontainer.com.

Crown Holdings, Inc. 215/698-5100.

www.crowncork.com.

Little Big Brands, 845/480-5911.

www.littlebigbrands.com.

Marietta Corp., 607/753-6746.

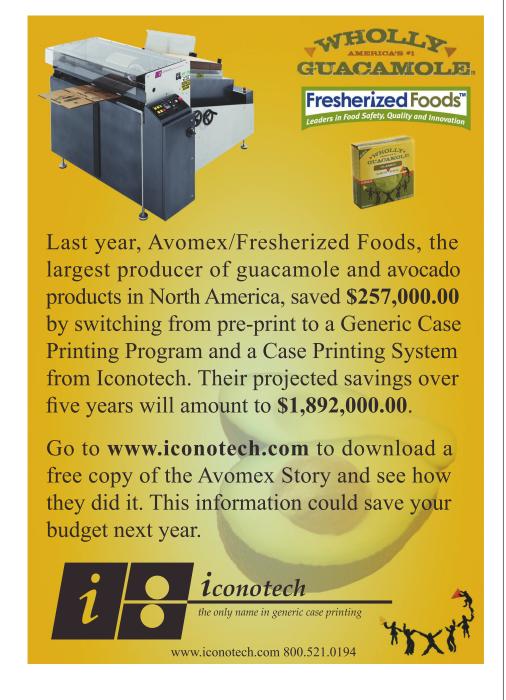
www.mariettacorp.com.

National Label Co., 610/825-3250.

www.nationallabel.com.

Stratasys Inc, 800/937-3010.

www.stratasys.com.







Dog treats are in the bag

AUTOMATED BAGGING SYSTEM for dry dog food and dog treats improves operating efficiencies at Sojourner Farms.

Jack Mans, Plant Operations Editor

A new bagging machine has increased efficiency dramatically for petfood producer Sojourner Farms, Minneapolis. The company promotes its products by handing out small sample bags of dog treats and dry food at shows, stores and other venues. Sojourner was filling and sealing these bags manually, and president Ward Johnson decided that the operation had progressed to the point that he needed to look into a more automated operation.

"Manually filling the bags with dog treats and dry food was very labor-intensive," says Johnson. "I wanted to install an automated bagging system that would improve the cost-effectiveness and efficiency of the operation."

Johnson had some experience with **Sharp Packaging Systems Inc.**, so he contacted Sharp's distributor **Anchor Paper Co.**, which stocks the bagging systems and the bags, to discuss adding a

system to replace the manual bag handling. After reviewing possible options, Johnson purchased a Sharp MAX bagging system.

The new packaging system is working fantastic. The equipment is doing a great job, and it has saved us two employees and tons of time.

Feeder weighs and counts

Sharp works closely with **M&S Automated Feeding Systems Inc.**, which makes centrifugal and vibratory bowl feeders and related equipment, and M&S installed a vibratory feeder on the bagger at its plant. Because Sojourner is filling

treats or powder into the bags, the feeder is equipped with both weighing and counting systems. The integrated system was installed at Sojourner Farms this past February.

To start the operation, a worker empties product into a cone-style bulk product hopper on top of the machine. This hopper delivers the product into a vibratory-style feeder bowl that moves the product up and forward so it is properly spaced along the track. If the plant is running pieces, like dog treats, they must be spaced so that a laser eye can count them. At the end of the track, the product moves past the count sensor followed by a scale, and then discharges into a bomb-bay-style dump bin.

Switch for pieces or powder

The operator sets a switch on the control panel for either pieces or powder, and this dictates whether the counter or the scale controls the dump. Sojourner typically fills as much as 10





The weighed amount of product (above) is delivered into a funnel that descends into the bag before it discharges to ensure that the powders do not adhere to the sealing area of the bag and compromise the integrity of the seal. Automated bagging system (left) incorporates a vibratory bowl feeder that delivers the product to the bagger. The system fills the product into preopened, perforated, biodegradable PE bags.

pieces or 0.75 to 1.75 oz of product into a bag, and the operator sets these quantities into the controls. When the proper amount of product is in the dump bin, the feeder stops, and the dump bin opens and discharges the product into an insertion funnel below.

Simultaneously with the operation of the feeder, the Sharp bagger pulls preopened, perforated, biodegradable PE bags from a roll into

The operator sets a switch on the control panel to set the system to run either pieces or powder.

the filling zone. The bags, which are also supplied by Sharp Packaging Systems Inc., are flexo-printed in four colors on both sides. In this integrated operation, the bag stops and an air-jet blows open the top of the bag as the feeding system's insertion funnel is filled. A door holds the bag open while it is being filled.

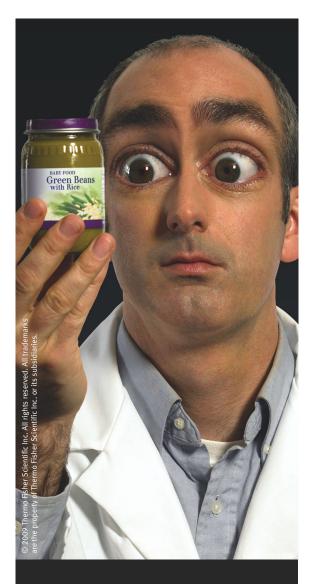
To ensure that the powders do not adhere to the sealing area of the bag and compromise the integrity of the seal, the funnel descends into the bag before the product discharges.



The operator sets a switch on the control panel for either pieces or powder, and this dictates whether the counter or the scale controls the bag filling.

The funnel rises while the bag is being sealed, after which the machine reverses slightly, which breaks the perforations, so the bag separates from the web.

After the insertion and dump sequence, the feeding system triggers the bagger to begin its next Continued on page 52



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Thermo scientific





A cone-style bulk product hopper on top of the bagging machine delivers the product into a vibratory style feeder bowl that moves the product up and forward so it is properly spaced along a track.

cycle while the dump bin closes and the feeding cycle begins again.

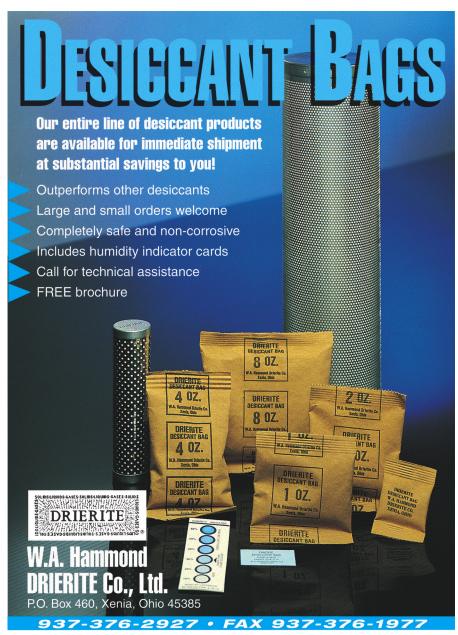
Operator selects product

The feeder bowl automatically restarts counting or weighing as soon as the dump bin closes, so it is already feeding product to

the scale/dump bin for the next cycle, while the Sharp bagger is cycling. An electrical panel with an Allen Bradley PLC and HMI operator screen from **Rockwell Automation** controls both the feeding system and the bagger-cycle sequence. The operator

selects which type of product is being bagged (powder or individual pieces) and enters the weight or the count on the HMI, and the system automatically controls the operation. The system runs 35 to 45 bags/min, depending on count or weight values.

More information is available:
Anchor Paper Co., 651/287-4588.
www.anchorpaper.com.
M&S Automated Feeding Systems Inc.,
952/894-3263. www.msautomated.com.
Rockwell Automation, 414/382-2000.
www.rockwellautomation.com.
Sharp Packaging Systems Inc.,
800-634-6359. www.sharppackaging.com.



www.drierite.com





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system integration

The Automation in Packaging study conducted last fall by Packaging Digest and Control Engineering magazines reveals a host of insights into the relationships between packaging integrators, packaging equipment vendors, packagers and their clients. One observation I noted last month was that a mere 8 percent of the packagers who responded to the first phase of the study cited "affiliations with preferred vendors" as a

lowest bidder will generally get what he's paid for. See the article, "Qualifications Should Come First," in the June 2009 issue of Control Engineering at www.controleng.com for more on that debate.

Tied for second on the list of what packagers care about, with a 51-percent selection rate, were "success of previous project with us" and "expertise in packaging." On those issues, packagers and integrators agree. Because integrators tend to

rely on repeat business from existing clients, their future prospects depend on executing

every job to the client's satisfaction. One of the

principal skills required to successfully integrate an automation system is expertise in packaging.

Curiously, though, general "technical skills" and "technical resources" were deemed only half as important by the survey's respondents, both with a 26-percent selection rate. Perhaps expertise in packaging requires more than just technical skills.

Even more curious was how few of the survey's respondents cited "geographic proximity" as the top criteria for choosing a system integrator—only 14 percent. That result directly contradicts the preferences expressed by packagers that use

the online Packaging Integrator Guide (under the Resources tab at www.packagingdigest. com) to search for system integrators.

Of the seven available search criteria, "location" is specified far more than any other-82 percent of all searchers ask for integrators located in a particular state or province.

More details about what packagers say they want when in a system integrator is available in a study by Bull's Eye Research (www.bullseyenet.com).

What End Users are Looking for in Automation System Integrators 2009 analyzes search statistics from the Packaging Integrator Guide and the broader Automation Integrator Guide (www.integratorguide.com) to identify trends pointing to the kinds of integrators in greatest demand.

Consulting Editor Vance J. VanDoren, Ph.D., P.E., contributes articles on process control, advanced control and systems integration and edits Control Engineering's annual Automation Integrator Guide.

Packagers downplay relationships between integrators and vendors

relationship between their vendors and their system integrators, at least not when it comes to choosing the right system integrator for a particular project. So what do packagers care about? Cost is a big issue. Of all the factors cited as the most important criteria for choosing a system integrator, cost was at the top of the list, having been selected by 64 percent of the survey's respondents. Equally predictable was the rebuttal from system integrators who claim that anyone who routinely chooses the

top criterion for choosing a system integrator.

Apparently, packagers don't much care about the





Prototypes pronto Additive manufacturing a.k.a. 3D PRINTING is guickening

the pace at which packaging designs become physical objects.

Linda Casey, Associate Editor

Despite the economic downturn, NextGen Research, a Allied Business Intelligence Inc. group, forecasts that three-dimensional printing will grow to a \$782.6 million market by 2013.

As the name implies, rapid prototyping benefits packaging operations by allowing quicker prototyping of containers than many traditional methods. This is possible because the 3D printers enable packaging designers to produce these physical objects directly from digital files.

One name, many technologies

"There's not total agreement when it comes to the terminology," remarks Terry Wohlers, president of **Wohlers Associates Inc.**, a firm that provides technical and strategic consulting on the new developments and trends in rapid product development and additive manufacturing (AM).

"Some people have a very narrow definition of the 3D printing term," he adds. "They believe it is an inkjet printhead that jets a binder or material to create an object. Other people have a broader definition of a 3D printer as a simple-to-use, officeready device."

Technologies that sometimes don the moniker 3D printing include fused deposition modeling (FDM), solid imaging via stereolithography (SLA), selective laser sintering and ink-jet, such as thermal phase change and photopolymer-phase change printing. This wide of a definition encompasses devices made a bevy of manufacturers including 3D Systems Inc. and EOS GmbH.

"To the people close to the industry, 3D printers typically are the low-cost devices," he explains. "These devices, generally, are priced from \$10,000



A sampling of prototypes,

levels of intricacy.

above, created by Flexpak Corp.

using 3D printing technology. The

printer allows the custom thermoformer to quickly produce models of varying



to \$50,000 and are made by companies such as Z Corp. and Objet Geometries."

Z Corp. attributes the basis for its prototyping processes to the Three-Dimensional Printing technology (3DPTM) originally developed

> at Massachusetts Institute of Technology (MIT) in 1993. The company's dimensional printing technology

creates prototypes

by solidifying

layers of

deposited powder using a liquid binder. The company's printers use standard ink-jet printing

technology to deposit a liquid binder onto thin

layers of powder. Instead of moving over sheets

of paper like a typical desktop ink-jet printer, the printheads of a Z Corp. printer move over a bed of powder on which it prints the cross-sectional data from a computer-aided design (CAD)

Objet Geometries claims to be the first company to successfully jet photopolymer material. The machine manufacturer debuted its patented

PolyJetTM technology in early 2000, which uses noncontact resin handling and water-jet removal of support material.

The company's PolyJet ink-jet technology works by jetting photopolymer materials in ultrathin layers onto a build tray, layer by layer. Each photopolymer layer is cured by ultraviolet light after it is jetted, producing fully cured models that can be handled and used immediately, without post curing.

The gel-like support material, which is specially designed to support complicated geometries, is engineered to allow easy removal by hand or water jetting.

Stratasys also refers to its devices as 3D printers and production systems. Its machines are sold under the brand names of Fortus and Dimension.

The company boasts that it is the inventor of FDM technology and has 11,000 worldwide installations, including a Arizona-based custom

thermoformer and copacker and a multi-national manufacturer of plastic bottles.

Solidifying custom concepts

Custom package manufacturing and contract packaging company Flexpak Corp. in Phoenix, provides services for the automotive, cosmetic, electronic, food, hardware, medical, personal care, printing and toy industries. Within the last two years, the company installed Dimension 1200es printers to quickly prototype concepts at various stages of the design process.

To hear first-hand how the Creative Services Group of Silgan Plastics Corp. uses 3D printing to **RAPIDLY PROTOTYPE BOTTLES**, visit www.packagingdigest.com/podcasts.

"We've started on everything from bar napkins to end sketches," remarks Ed Berger, vp of business development at Flexpak. The company also can use a sample package as a starting point for a new packaging design.

Flexpak design engineers take customers' concepts and create the digital design files using Pro/Engineer software from Parametric Technology Corp.

File trafficking is provided by the Dimension Continued on page 56





printer's Catalyst® EX software, which automatically imports STL files, orients the part, slices the file, generates support structures as necessary, and creates a precise deposition path to build an ABSplus model. The software also provides queue-management capabilities, build time, material status and system status information, thus allowing the printer to run unattended and provide system and build status information via e-mail or the Internet.

Flexpak has been able to use its 3D printing capabilities to extend its offerings to a wide range of applications that extends beyond packaging.

"We have used this for a medical device," Berger remarks. "I'm not permitted to say who it is. But it was a two-piece, snap-together, retaining part for an angioplasty medical device. We had a section of the part for the containment of the handle on the angioplasty device, and we wanted to make sure it was going to function properly before we took it to sell the customer on it."

While the thermoformer has been able to extend its packaging/parts offerings, it didn't need to add shifts to accommodate the new business, Berger explains, "Once a design is done, we can basically create the prototype overnight as a lights-out operation."

FDM speeds bottle designs to market

The Creative Services Group of **Silgan Plastics Corp.** also uses Dimension printers to quickly

prototype designs. The packaging manufacturer creates approximately 900 bottle prototypes/year.

"Designs begin with 3D drawings," says Silgan group manager Stephen Kocis, "but early on, we develop 3D FDM models for our own use as designers, giving us a better sense of the final bottle. As designs reach more finished states, the FDM models are used in our presentations to customers."

of prototyping, the cost of entry for 3D printing continues to drop. **Desktop Factory Inc.** manufactures a tabletop 3D printer that weighs less than 90 lb and has a footprint of 25x20x20 in. The device uses an inexpensive halogen lightsource and drum printing technology, which allows the company to sell the device for several thousand dollars versus tens of thousands. Open-source projects promise to lower the barrier

Once a design is done, we can basically create the prototype overnight as a

lights-out operation.

Prototypes are created as solid shapes, hollow shapes with controllable wall thickness, or hollow shapes with internal honeycomb structures for greater strengths. Generally, the prototypes produced by Silgan are white. The company then paints and decorates the bottles as necessary.

Each of Silgan's three 3D printers can make multiple models at once—as many as will fit within the FDM build area. This enables the Creative Group to cost-effectively produce multiple models, shortening the design process and the time to market for a package.

"Designs typically progress through multiple iterations, and being able to make new FDM models quickly and cost-effectively is essential," says Kocis.

Cost of entry is dropping

As a quick and inexpensive method

to entry even further. Projects such as **Fab@Home** and **RepRap** are being conducted to help anyone with an Internet connect to build a simple machine using freely distributed hardware and software designs.

Lornamead uses 3D printing to update bottles for its **FINESSE** hair care line. See the complete story on p. 46.

More information is available:

Silgan Plastics Corp., 630/663-0250. www.silganplastics.com.

Desktop Factory Inc., 626/229-3190.

www.desktopfactory.com. EOS GmbH, 49-89-89-3360.

www.eos.info.

Fab@Home (open-source project),

www.fabathome.org.

Flexpak Corp., 602/269-7648.

www.flexpakcorp.com.

Objet Geometries Ltd.,

877/489-9449.

www.objet.com.

Parametric Technology Corp.,

781/370-5000. www.ptc.com.

RepRap (open-source project),

www.reprap.org.

Stratasys Inc., 800/937-3010.

www.stratasys.com.

Wohlers Associates Inc,

970/225-0086

www.wohlersassociates.com.

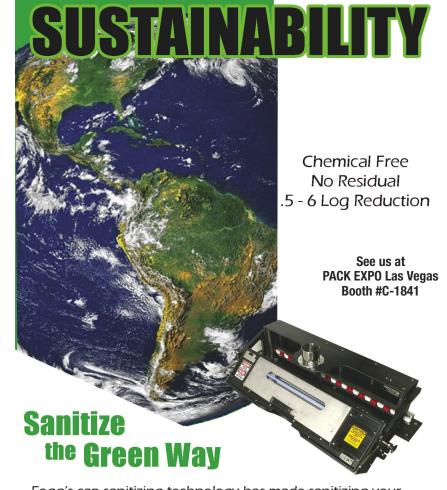
Z Corp., 781/852-5005.

www.zcorp.com.

3D Systems Inc., 803/326-3900.

www.3dsvstems.com.





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PACK EXPO dazzles Vegas

The **BIGGEST PACKAGING TRADESHOW** in the U.S. returns to America's desert playground in 2009, Oct. 5 to 7.

David Bellm, New Media Editor

With its longstanding reputation as the leading light among North American packaging shows, PACK EXPO is a favorite among packaging professionals looking for the latest concepts, innovations, and ideas. The show returns this year to Las Vegas, Oct. 5 to 7, with a backdrop of bright lights and spectacle that only America's desert-oasis entertainment capital can provide.

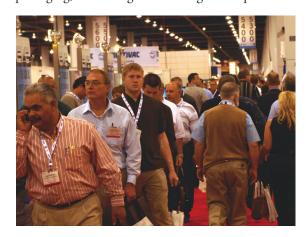
But beyond the neon dazzle, for 2009 PACK EXPO adds a number of new additions that make attending the show even more valuable than ever before. Foremost among these enhancements is PACK EXPO's new section focused on branding.

The Brand Zone

For 2009, the show's host, **The Packaging Machinery Mfr.'s Institute (PMMI)**, is launching The Brand Zone at PACK EXPO. This new feature spotlights packaging technologies that can help "Open Innovation" executives, brand managers, marketers and package designers launch new products, refresh existing brands and improve sustainability scores.

The Brand Zone will also offer access to business intelligence and other resources that can help attendees gain a competitive edge. "No medium is a more effective communicator for a brand than the package itself," says Charles D. Yuska, president and CEO of PMMI, produce of the show. "The Brand Zone will offer consumer packaged goods companies and private-label manufacturers the tools they need to turn packaging into a powerful form of in-store advertising and increase turnover at point-of-sale."

Exhibits will include innovative materials and containers that can increase visual impact, enhance convenience, maximize shelf life and add functionality. Among the solutions will be the latest advances in glass, plastic, metal and paperboard packaging, decorating and labeling techniques and



resealable technologies.

Visitors to The Brand Zone will also be inspired by award-winning package designs from around the world in The Showcase of Packaging InnovationsTM, sponsored by Dow Chemical Co. Packages nominated for the annual PACK EXPO SelectsTM program, which recognizes best-in-class consumer packaging, will reside here as well.

"When you combine The Brand Zone with PACK EXPO's range of packaging, processing and converting machinery exhibits, the distinct advantage to attendees is clear," says Yuska. "The show provides access to the entire packaging supply chain in a single location. Brand owners save time and money, and have access to the information they need to commercialize packaging concepts more

quickly and efficiently—and ultimately, to stay competitive and grow the bottom line."

Co-located shows

To further enhance the PACK EXPO experience, the show is co-located with several other key events, including PROCESS EXPO and

PROCESS EXPO features the newest developments in food-processing technology; supplies and services in fruit and vegetable processing, meat, poultry and seafood processing, confectionery and snack processing as well as bakery and beverage processing technologies. PROCESS EXPO is sponsored by the **Food Processing Suppliers Association (FPSA).**

CPP EXPO (Converting & Package Printing) reflects the market synergies of the package printing, converting, finishing machinery and supplies industries. From digital prepress and workflow solutions, right through to finishing equipment, CPP EXPO covers the changes and evolutions in package printing, coating, slitting and other state-of-the-art materials and services for streamlining operations and improving quality.

Also, the International Bottled Water
Association (IBWA) will hold its 2009 convention and tabletop tradeshow in conjunction with PACK EXPO Las Vegas 2009. The IBWA 2009 show will take place Oct. 5 to 9. Attendees will receive complimentary admission to PACK EXPO Las Vegas exhibits.

In addition to the IBWA show, the **Association** of Independent Corrugated Converters (AICC) will hold its 2009 Annual Meeting and 14th Continued on page 58





Conference at PACK EXPO registration

Discounted registration for the Conference at PACK EXPO is currently available at www.packexpo. com. Register for conference sessions before Sept. 15 for \$55 per session. Fees go up to \$75 per session for registrations received after Sept. 15 or onsite. Attendees must register for PACK EXPO before they can sign up for conference sessions.

Conference schedule (as of July 15)

Program updates and abstracts for each presentation can be found on **www.packagingdigest.com**

Monday, Oct. 5 10:00 – 10:50 a.m.

Keynote: The Future of Retailer Packaging and

Branding—The A&P Story

Speaker: Doug Palmer, vp, Our Own Brands, The Great

Atlantic & Pacific Tea Co.

Tuesday, Oct. 6

10:00 - 10:50 a.m.

Keynote: Packaging—A Holistic Approach to Winning **Speaker:** Mike Witynski, Group vp, Our Own Brands,

Supervalu Inc.

Wednesday, Oct. 7

10:00 – 10:50 am

Keynote: Day One to Doors Open and Beyond
—Tesco's Fresh & Easy Builds a Totally Branded

Speakers: Steve Ryder, store design & planning director, Fresh & Easy Neighborhood Market; Kevin O'Donnell, founder, thread collaborative

International Package Design Competition in conjunction with PACK EXPO Las Vegas 2009.

Bringing packaging ideas to life

Complementing the action on the show floor is the event's extensive conference program. The Conference at PACK EXPO is a rich and varied series of presentations that brings attendees the latest concepts and innovations from top professionals.

This year, the theme for the conference is

"Maximizing Performance, Sustainability & Economics. The program will feature leading retailers offering their unique perspectives on the private-label sector, and more than 50 sessions by industry experts exploring an array of issues affecting today's packaging professionals.

Conference sessions are organized into several

scheduling meetings, creating personalized event maps and researching Conference at PACK EXPO education sessions. Attendees will also be able to use the site and the information they've gathered for several months after the show closes.

Once packaging professionals officially register for the show, they can take the pre-planning

"The show provides access to the entire packaging supply chain in a single location."

tracks including Branding, Converting, Digital Package Printing, Economics, Intelligent Coding, Legal Landscape, Materials, Processing, Sustainability, Sustainable Operations and Vision Systems.

Each day's program features a keynote address at 10:00 a.m. Delivered by top executives from A&P, Supervalu and Fresh & Easy Neighborhood Market, the presentations will provide insight into why consumers are choosing private label brands and what retailers are doing to enhance the consumer's retail experience. For the remainder of each day's programming, sessions run concurrently in four time slots, allowing attendees to take up to four sessions per day and keep their show commitments.

Website eases show access

To help visitors take advantage of the many programs and opportunities offered by PACK EXPO, PMMI has extensively redesigned its website, packexpo.com. The new show-centric site will support packaging professionals with all aspects of attending PACK EXPO Las Vegas 2009 and allow them to continue to make the fullest use of those resources throughout the year.

"PACK EXPO tradeshows are valued for bringing the entire packaging supply chain together under one roof, making it easy for brand owners to identify ways to improve productivity and efficiency, enhance shelf presence and meet sustainability goals," says Yuska. "The new packexpo.com supports this strategy by providing packaging professionals the resources they need year round."

Visitors to the site can plan their trip by searching for exhibitors and specific technologies,

process one step further with the help of My PACK EXPOTM. These interactive portals allow attendees to locate specific suppliers and solutions, make booth appointments with exhibitors, register for the Conference at PACK EXPO educational sessions and talk with industry peers.

Attendees will even be able to plan their trip to PACK EXPO Las Vegas from their PDAs, thanks to a new technology called ChirpE. This downloadable application links users directly to packexpo.com in real time and allows them to search for products, exhibitors and sessions, create itineraries and download floor maps. This new service will be available in late September.

Registration and contact information

PACK EXPO Las Vegas 2009 show attendees registering online before Sept. 24, 2009 pay \$30 for admission. Onsite registration, and all registrations received after Sept. 24, will be processed at the full admission rate of \$60.

The admission fee allows access for the entire three-day event to all PACK EXPO exhibits and to the co-located PROCESS EXPO and Converting and Package Printing EXPO (CPP EXPO). Entrance to all of the show's technology pavilions is also included.

PACK EXPO Las Vegas 2009

Oct. 5 to 7, 2009

Las Vegas Convention Center, Las Vegas, NV. www.packexpo.com

sustainability

The Global CEO Forum brings together the CEOs of major consumer packaged goods and retail companies twice a year. Responding to growing concerns about potential inefficiencies arising from insufficient coordination of sustainability actions by various stakeholders and a lack of common or harmonized standards, one of the outcomes of the November 2008 meeting was the formation of the Global Packaging Project.



Under the guidance of Association des Industries de Marque (AIM),, Comité International d'Entreprises à Succursales (CIES, the Grocery Manufacturers Association and the Food Marketing Institute, a working group of member company representatives met this past spring to develop

A global packaging project forms

definitions and common principles for metrics used to measure the sustainability of packaging.

One of the key consensus principles identified by the working group was that the metrics used to measure sustainability need to be life cycle-based and address the relevant aspects of the life cycle of packaging. In some cases these metrics may be well-understood life cycle impact categories and in other cases, they may not. Another key point of consensus was that the sustainability of packaging cannot be measured in a single metric.

At the most recent June 2009 meeting, the work accomplished to-date was presented, along with the recommendation that the group continue its work by identifying a set of globally recognized, standard sustainability metrics for packaging. The goal is to develop a set of accepted metrics that are well documented in terms of their relevance to packaging, the algorithms and methodologies used to calculate them and guidance for the type of information needed to support them. This has the potential to create useful guidance for the supply chain and goes a long way to create some much needed standardization. The work is set to begin in the third quarter of 2009.

While it remains to be seen what will come out of this process, the intent is not to be prescriptive in what metrics any company uses to measure the sustainability of packaging. What it's supposed to achieve is that for any metric an organization chooses to use, there will be standard guidance the supply chain can refer to regarding its use. This could have significant benefits in terms of simplifying and standardizing information requests for packaging.

This spring, the Sustainable Packaging Coalition (SPC) released to its members the Sustainable Packaging Indicators and Metrics Framework after an 18-month effort to develop a comprehensive set of metrics to measure progress toward SPC's definition of sustainable packaging. After reviewing 54 different sources of metrics related to sustainability, an SPC working group went through a rigorous process to a select those metrics most applicable to packaging and align them with the eight elements of the SPC definition. The value of this work is that it is guided by a clear vision for the sustainability of packaging and benefited from the expertise of a diverse group of packaging and sustainability professionals.

We at the SPC have been invited to share this work with the Global Packaging Project, and the work will be reviewed during the upcoming phase of the project.

It is expected that with continued collaboration, the Global Packaging Project can produce useful guidance to clarify, standardize and minimize this barrier to the effective assessment of the environmental, social and economic characteristics of packaging in the context of sustainability.

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



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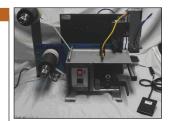
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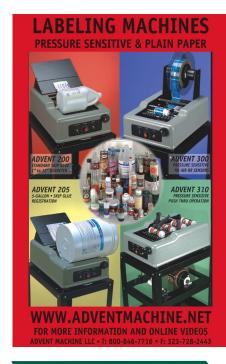
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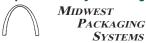
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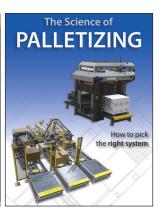


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Package design recharges energy drink Excellence in Packaging Blog

As concentrated one-shot drinks are winning over consumers, ordinary energy drinks are facing the same category fatigue that has blighted much of the beverage industry. But one creative brand is using design to buck this trend, says blogger Anton Steeman ... www.packagingdigest.com/oneshot



Ball to acquire four packaging plants from AB InBev

Ball Corp. has signed a definitive agreement with Anheuser-Busch InBev to acquire certain elements of AB InBev's beverage can manufacturing assets. In the first full year of operation, Ball expects the plants to generate revenue of approximately \$680 million

www.packagingdigest.com/ballinbev



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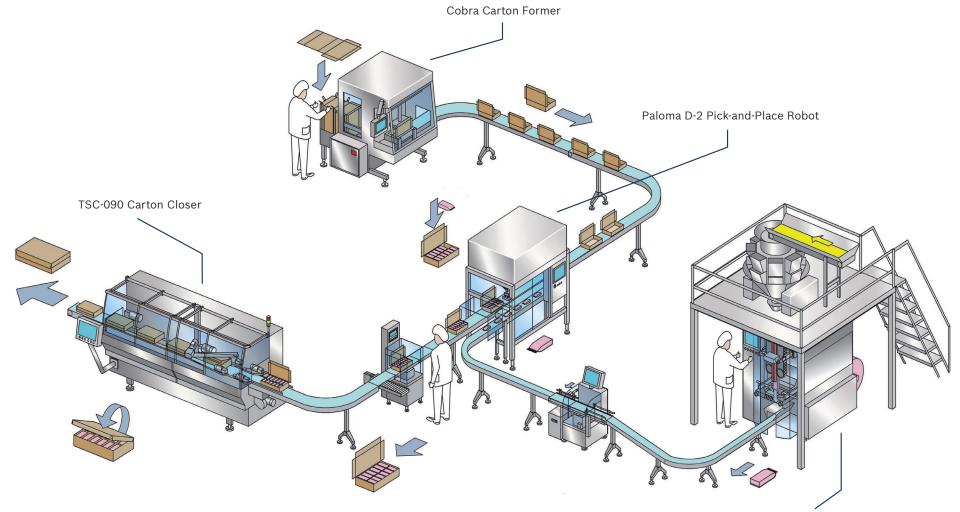
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