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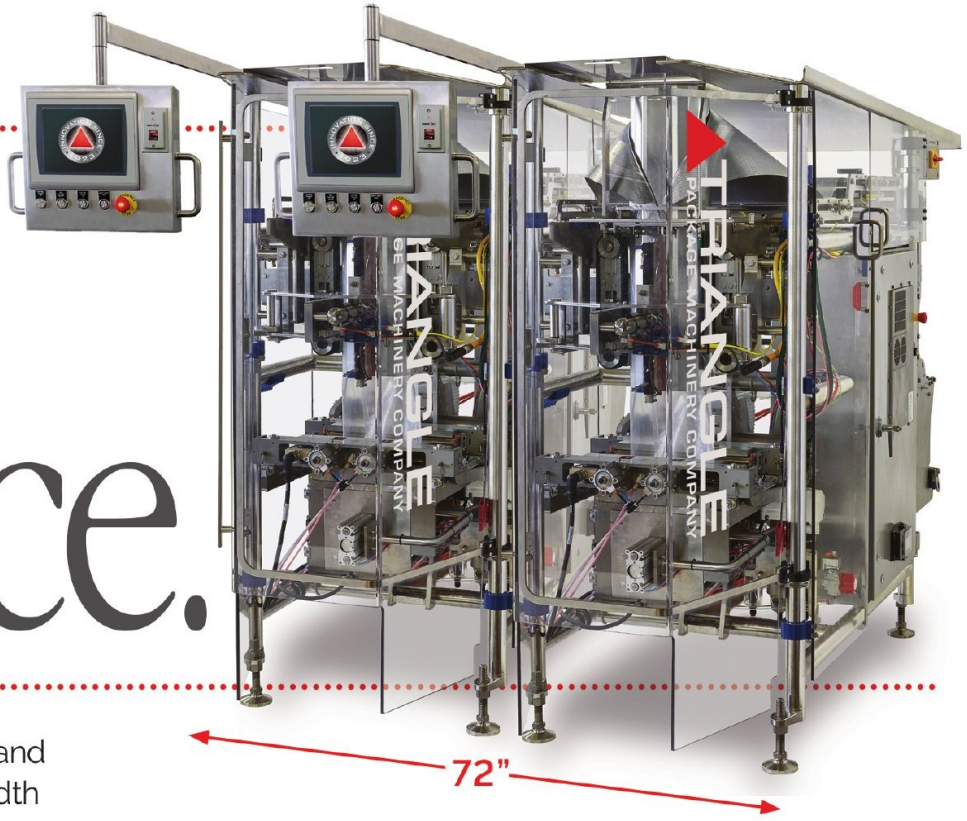

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EDITOR'S NOTE

Packed in Paper

As companies continue to improve carbon footprints, renewable resources are being closely looked at for breakthrough developments, utilizing technology and moving toward solving the technical challenges around developing packaging. Paper is indeed a highly recycled material and can be sustainability sourced, and is one that is being looked at on an agenda by several leading beverage companies.

Paper packing developments have potential to benefit premium spirits manufacturers, as well as presents a window of opportunity to consider a more sustainable packaging format, and below you will find a few leading the way in 2021.

Focusing on finding new and sustainable packaging solutions that have the potential to reduce a carbon footprint and ultimately achieve circularity Absolut Vodka is set to launch its prototype for "Absolut Paper" in the UK. Absolut Paper comprises 57 percent paper and 43 percent recycled plastic. In the initial stages of the project, a first-generation prototype of the paper bottle was created that consisted of biodegradable FSC-certified paper with a barrier of recycled plastic. The company states that it has committed to reducing its carbon footprint by 50 percent by 2030, of which 30 percent is through packaging innovations.

Diageo is planning to launch Johnnie Walker scotch whisky in plastic-free bottles in early 2021. The new bottle was developed in partnership with venture management company Pilot Lite. It will be made from wood pulp that reportedly meets food grade standards and is fully recyclable.

Diageo and Pilot Lite have launched a sustainable packaging company called Pulpex Ltd to develop the paper bottle and collaborate on research and development. Pulpex will also create branded paper-bottles in non-competing categories for companies including Lipton team maker Unilever Plc and soda maker PepsiCo, which are also expected to launch next year.

PepsiCo reported that this innovative effort is taking another step towards its goal of reducing virgin plastic content across its beverage business by 35 percent by 2025. The company is also working to make 100 percent of its packaging recyclable, compostable, or biodegradable by 2025–and reports that it is about 90 percent complete.

Through partnerships and continued efforts, companies can continue to drive progress toward a circular economy. One where plastics no longer become waste by having a clear focus on reducing, recycling, and reinventing packaging materials and processes.

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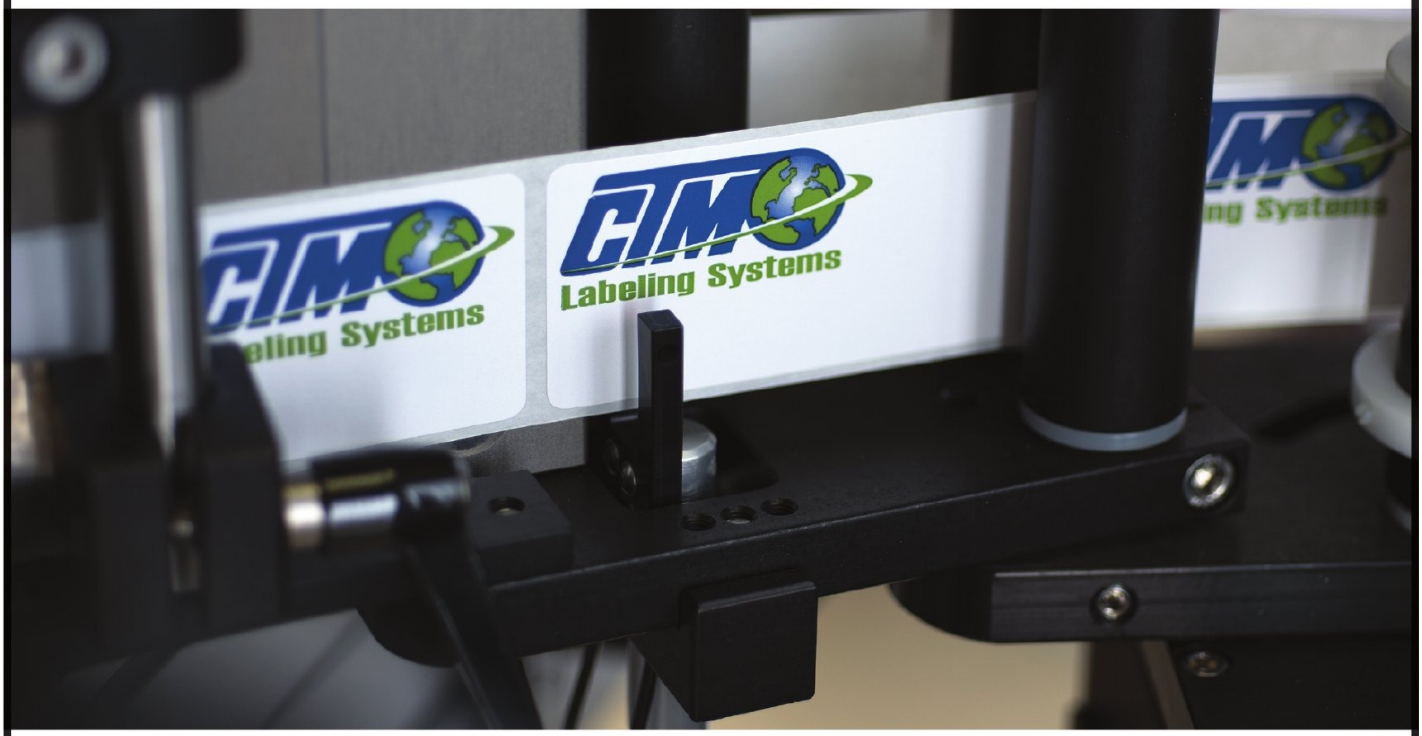

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To accommodate our current reality and meet consumer demand for online orders, retailers are reevaluating their packaging solutions.

THE NEW NORMAL:

eCOMMERCE BOOM DRIVES CHANGES IN SUPPLY CHAIN PACKAGING

By Andrea Nottestad, Senior Product Manager at Orbis

March marks one year since the material handling industry as we knew it changed forever and the supply chain became front and center to today's consumers. Over this past year, we've seen explosive growth in the world of eCommerce. While the COVID-19 pandemic illuminated the global nature of our supply chain and accelerated the adoption of eCommerce, increased consumer expectations are also driving this new normal.

As a result of this eCommerce boom, packaging is becoming a more integral (but often underappreciated) consideration within fulfillment. To accommodate our current reality and meet consumer demand for online orders, retailers are reevaluating their packaging solutions.

Micro-fulfillment and BOPIS expansion

eCommerce is no longer just in distribution centers; it's in the stores themselves. As a result of the pandemic, many retailers shifted their models to implement the buy online, pick up in store (BOPIS) practice, while simultaneously growing their curbside capabilities. Models for BOPIS are now occurring more regionally, using hub stores, dark stores and micro-fulfillment centers. While these centers allow retailers to consolidate their eCommerce activity and provide greater picking efficiencies, this model requires different packaging to accommodate the smaller space and consumer-centric environment.

Picking containers are nestable for space savings and stackable to easily assemble orders. Mobile pallets support picking, delivery, stag-

ing and curbside fulfillment in one single base platform. These solutions can work from micro-fulfillment centers to the store floor. With curbside pickup continuing to rise, integrated tote and cart systems provide store associates with a space-friendly mobile system to pick and fulfill orders. Ergonomic and portable, reusable packaging simplifies eCommerce operations and reduces order pick times to meet demand.

Rise in in-store fulfillment

To accommodate a surging demand for grocery delivery and pickup, many retailers are now using their stores for fulfillment. Back rooms are small, and the resulting space constraints are huge. Retailers are looking for ways to optimize their backroom and maximize space for store operations, while still providing ease of use for associates. What's more, associates are also picking online orders at the same time alongside their customers, making it important for retailers to consider how their packaging might interface with a customer versus at an off-site distribution center.

Packaging used for picking must be non-disruptive to in-store customers. Retailers must now ask themselves whether their packaging will fit down narrow aisles, and lock in place to prevent rolling and injury should a customer brush past while an associate is picking. By incorporating reusable packaging solutions, retailers can optimize in-store processes for efficient online order fulfillment, while seamlessly interfacing with customers.

For example, reusable plastic mobile dollies with sturdy handles and wheel brakes support associates as they conduct picking and deliver product car-side. These solutions are smooth to the touch, meaning they can be safely used alongside customers. Knowing that BOPIS activity is cyclical, the ability to stack, nest or collapse packaging when not in use allows retailers to limit the space needed for assets.

The need for automation grows

To address the costs for increasing speed to the consumer, companies are looking toward automation in their DCs and fulfillment centers. But to adopt more automated practices, companies must also reevaluate the packaging used throughout the supply chain. Automated environments require standardized, dimensionally consistent containers and pallets, a need that can be met with reusable plastic packaging.

The standardized nature of reusable packaging allows it to better interface with automated systems, reducing jams and improving the flow of product along the supply chain with little to no system downtime.

Picking containers are nestable for space savings and stackable to easily assemble orders.

Reusable plastic mobile dollies with sturdy handles and wheel brakes support associates as they conduct picking and deliver product car-side.

Downtime is not only inefficient, but also leads to costly delays in picking and delivery. To keep up with consumer demand, companies must ensure that the packaging used within their automated practices won't cause stops within high-speed systems.

Intersection with sustainability

Today's savvy consumers now demand a focus on waste reduction and recyclability – at every point in the supply chain. They want to buy from brands that have sustainable operations and supply chains. When many

consumers think of eCommerce, they often think of its arrival at their doorstep; but there's a whole other side to eCommerce before it reaches the end user. With companies getting closer to the consumer to accommodate eCommerce sales, they're becoming more conscious of the packaging used not only for the final mile of delivery, but also back in the supply chain. Reusable packaging helps satisfy consumers craving sustainability.

Reusable packaging supports the three R's in the environmental hierarchy by designing out waste (reduce), keeping products in use longer (reuse), and repurposing packaging at end of life (recycle). Not only will companies reduce shipping and waste disposal costs with reusable packaging, they'll also make a positive impact on the environment.

The future of packaging for eCommerce operations

The future of retail will play a leading role in the type, size and material of packaging used for eCommerce. But there's one thing that is certain: eCommerce is here to stay, and companies must adapt in order to compete. eCommerce touches many points in the supply chain and companies are finding there is significant opportunity in having an effective eCommerce strategy. The key? Start now by evaluating your packaging solutions to find the most efficient and effective ways to support eCommerce fulfillment. ■

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TOP TIPS FOR BETTER PRINT AND APPLY CODING

By Mike Kirk, Print and Apply Product Marketing Manager at Markem-Imaje

Print and apply (P&A) coding is extremely popular for two reasons. First, it accommodates the widest range of materials and shapes, since the product surface is largely inconsequential when using labels. In fact, apart from offline label tag solutions, where you put a printed card on the pallet strap, P&A is the only other reliable method for coding pallets. Second, it provides the highest and most reliable quality printing of all available technologies, including "A" grade compliant barcodes.

This is because, in P&A, the print itself can be tightly controlled. By melting a coating of a ribbon, the desired content is transferred onto a label of a known size, quality and orientation. The label is then applied to the packaging.

So, what can manufacturers do to ensure that they get the most out of this technology?

Maximizing efficiency and throughput

While the widely adopted standard length for labels and ribbons is 450 meters (1,476 feet), sizes vary. Selecting ones of 660 m (2,165 ft) has been shown to reduce stoppages by 45 percent. They are also a good compromise of size versus safety in terms of operators lifting the rolls.

In direct thermal P&A, using a lighter thermal transfer label enables companies to deploy 800 m (2, 625 ft) rolls, for even greater benefits, while still being safe to use.

Adopting matched length rolls also cut downtime, as only one stop, per pair of consumables, is needed for replenishment.

Roll length aside, feeding labels via the wide edge will deliver more labels for a given roll length. For example, consider a 2 x 4-inch label. A narrow-leading label provides one label every four inches (101.6 mm), plus the small gap between labels. Wide-edge leading labels give you almost twice as many labels – one label every two inches – resulting in fewer changeovers as lines can run twice as long before the consumables need changing.

Even 100 percent coding-related uptime is achievable, assuming system linkage is possible. When one printer undergoes any media change, corrective action or basic maintenance activity, the other steps in. However, there must be an intelligent link between the two printers so that the handover happens seamlessly, without a third-party controller, PLC or complex wiring. If the latter are need-

With flexible applicators, shrink-wrapped packs no longer need to be turned to avoid labeling the inner contents through the 'bullseye'. Compliance with GS1-128 dual-sided coding recommendations is also easier too.

ed, the extra hardware or installation costs could outweigh the benefits.

A watch-out when dealing with shrink-wrapped items.

Such products, e.g. beverage six-packs, often come out of packaging machinery with the short edge of the tray to the side. This edge has what is known as a 'bullseye': an area insufficiently covered by the wrap. If manufacturers apply a label to the side as it comes down the line, they risk putting it through the bullseye and onto the inner product. To prevent this, manufacturers have needed to find the space, and the funds, to turn the trays as they come down the line. Modern, flexible applicators, however, can adjust to put the label on the front. This avoids the bullseye without turning the trays, and avoids lowering throughput, since re-orientating the cases is no longer required.

At under 100 watts (W) at full speed and 35 W in standby, the 2200 Series is lowest P&A power consumer. It also uses less air due to its proprietary vacuum generators and label sequencing, made possible by its high processing power and overall speed.

Meeting increased demand for GS1-128 barcodes

A rise in pallet-splitting, greater automation and high-profile recalls is driving demand from grocery, foodservice and healthcare companies for GS1-128 barcodes. These barcodes streamline traceability given the extra information they can encode. GS1-128 advises providing the barcode on more than one side to ensure there is at least one readable label, should one become damaged.

Until recently, a barrier to GS1-128 barcode adoption had been that applying labels to more than one side of a case at high speed meant rotating the cases and a gap of over 400mm (16 inches) between each. This required costly pack-turning devices, product separators, line speed reductions and/or lengthening of existing lines. Equipment that pushes cases into different positions can lead to case or content damage, while line lengthening typically costs US$ 20,000 - 40,000 per line. It is often not feasible for small to medium companies, whose capital resources cannot stretch that far, and/or in space-constrained areas.

Technology in the form of flexible applicators now exists where labels can now be put onto the front and/or side of a case without turning the pack.

Improving sustainability

Given the label backing and ribbon waste generated by P&A, some have questioned its future given increased sensitivity to the environmental aspects of production and distribution.

Growth in P&A remains healthy. Indeed, independent reports continue to predict global growth of 3-5 percent including in the western, 'more environmentally-aware markets.'

In our experience, companies are happy to discuss reduction of consumption and waste, but not at any cost. So, while it may be true that P&A growth is being reined in by environmental concerns, there is a noticeable shift to more sustainable variants of the technology.

In the past manufacturers thought little of using unmatched rolls and ribbons and, rather than stopping their lines twice to replace each consumable, would throw away the excess. Increasingly, they see the value of using rolls and ribbons of a matched length to eliminate such waste, as well as to enjoy the uptime-enhancing benefits mentioned earlier.

Additionally, they are turning to ribbons with back coatings that increase the life of printheads and cut rework, by reducing spotting and streaking, versus non-coated base layers. Coated ribbons deliver these benefits by reducing the build-up of electrostatic which damages components, and by preventing dust from migrating onto the ribbon. This means less hardware goes to landfill, and waste from scrapped, poor quality prints is minimized.

At Bel Group, the world's third biggest cheese producer, label and ribbon roll changes are synchronized and can be reloaded in less than 40 seconds.

Manufacturers are also turning towards recyclable label liners and, before purchase, are asking about the recyclability of the hardware at the end of its lifecycle. It is possible to find equipment which is over 95 percent recyclable.

Another way to be more sustainable is to look for machines that are efficient in terms of power and air usage, but which don't sacrifice performance.

Conclusion

P&A is a fundamental staple of package coding but, even with a technology as prevalent as this one, there are still many ways to improve efficiency and sustainability. ■

About the Author

Mike Kirk is the print and apply product marketing manager at Markem-Imaje. With over 30 years' experience in the industry, in various technical commercial and marketing roles, he specializes in developing GS1 compliant case and pallet labelling solutions for manufacturers who want to reduce downtime and increase production capacity.

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UNIQUE CANNABIS CONSIDERATIONS REQUIRE INNOVATIVE PACKAGE DESIGN

By Liam Hawry, Director of Proactive Product Design at Studio One Eleven, the design division of Berlin Packaging

The cannabis sector is one of the fastest growing industries in the United States. According to Marijuana Business Daily, U.S. retail sales for medical and recreational cannabis reached $15 billion in 2020, an approximate 40 percent increase from 2019. And that number could rise as high as $37 billion by 2024. This rapid growth is due in part to the continuing legalization of marijuana in many states, most recently Illinois, Arizona and New Jersey. In addition, consumer attitudes and behaviors have shifted, with more widespread interest in, and acceptance of, cannabis and cannabidiol (CBD). With a wide range of benefits including pain management, anxiety relief, sleep support, and relaxation, cannabis and CBD are expanding into many market categories, from food and beverage to nutraceuticals and personal care.

Packaging plays a critical role in the regulatory approval and effective use of cannabis and CBD products. The various product types – topicals, tinctures, edibles, capsules, powders, beverages, and flower each have their own specific packaging formats, with their own unique challenges. There are often multiple complex functional requirements for these products, such as being child-resistant and senior-friendly, providing high moisture and oxygen barriers, UV-protection, food-safety, and odor-sensitivity. Many cannabis brand owners emphasize sustainability as a consideration for their consumers as well. These technical challenges are then compounded by a landscape of ever-changing regulatory requirements, which can vary significantly by state and country. Packaging regulations include obscure needs such as being all-white, certain size constraints, surface finishes or opacities, not to mention tax stamps and all manner of label claims and warnings. In many cases the requirements may be vague and inconclusive, such as FDA guidance on the use of CBD in food and beverage. These roadblocks, however, can create opportunities for brands who successfully innovate and comply.

Rapid growth and this assortment of requirements has led many cannabis and CBD brands to utilize available packaging options that may be semi-functional or non-optimized for the brand or consum-

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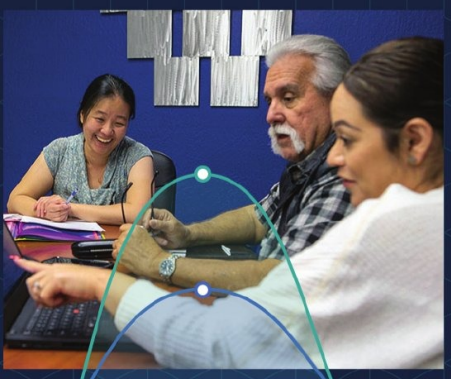

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Range of child-resistant-capable packages forming a familial line across product formats.

er experience of these products. One of the most common product formats is concentrated oils, which are intended to be dosed in very small amounts (1-2mL) sublingually. These products are generally referred to as "tinctures", though most are MCT oil-based rather than the alcohol base typically associated with tincture products. Therefore, the industry-standard glass bottles and bulb-droppers, which perform well with low-viscosity or alcohol-based products, are not well suited to the act of measuring and dispensing cannabis and CBD oils. These oils are thick and viscous, clinging to the inside and outside of the glass pipettes, where the bulb extraction force does a poor job of expelling the product. This can lead to a messy and inaccurate usage experience. New packaging systems must be developed to create better brand experiences for consumers.

Similarly, current packaging options for lotions and creams do not yet deliver the functionality needed for these categories. Child-resistant senior-friendly dispensing systems required for the regulated THC-based topicals are few and far between. Those that do exist are often hard to open and use, especially for the highly prevalent senior demographic of cannabis and CBD users. Many of these consumers suffer from arthritis or other afflictions relevant to the pain-relief remedy at hand. When consumers do successfully open the packaging, they often face another daunting task with topicals – achieving repeatably accurate dosing.

Many cannabis or CBD creams recommend specific amounts in the arcane volumetric language of packaging professionals, while consumers are left to manage bulk product inside a jar. Even pumping packages generally do not intuitively connect the recommended measurement to the output. The need for accurate dosing is then coupled with a need for portability, as many users discover their own optimized application regiment for these products, which may include several small doses per day. This combination of ease, accuracy, portability (and due to persistent social mores, a bit of discretion) add up to a full plate of packaging needs still waiting to be addressed by next-generation packaging options.

Cannabis and CBD packaging involves many specific regulatory and functional challenges. Using packaging borrowed haphazardly from other categories can lead to negative consumer experiences that ultimately damage or dilute the brands they support. Working with design partners and packaging suppliers that understand the unique product and market considerations for cannabis and CBD is key to a brand's success. The future is ripe for innovation, as these markets continue to grow and evolve. Companies who can translate the challenges into change will find opportunities to become the category leaders. ■

About the Author

Liam Hawry is the director of proactive product design at Studio One Eleven, the design division of Berlin Packaging. Having supported hundreds of successful FMCG product launches through design, and with over fifty named patents, Liam oversees the development of next-generation product offerings for Berlin. This includes a focus on the emerging segments of CBD and cannabis.

INNOVATIVE MANUFACTURING PRACTICES FOR AN ENVIRONMENTALLY CONSCIOUS WORLD

Heather Pelletier, Director of Packaging Brands at Sappi North America

While it may surprise some, the inherent sustainability of the paper and packaging manufacturing industry has led to some of the most innovative and environmentally conscious practices. As an industry dependent on natural resources, like trees and water, the importance of minimizing its environmental footprint has evolved from a risk mitigation measure to an opportunity driver, especially in light of climate change and the need to reduce the use of carbon-based fuels and products. New ways of sourcing and managing resources sustainably are being explored at every stage of production: from exploring new biofuel resources, to the processing of the wood pulp and fiber, to what happens with byproducts. Below are several sustainable practices that those in the business of paper and packaging manufacturing should employ to minimize their environmental impact.

1. Promote Forest Stewardship & Responsibly Managed Forests

For paper and packaging manufacturers, sustainable practices start with responsible stewardship of the forests and using every part of the tree. A tree is comprised of different fibers and the more we learn about the properties of these fibers the more we can imagine what can be done with them. These fibers include cellulose, lignin, and hemicellulose. Not only are they essential ingredients for pulp and paper products, but they can be a carbon neutral, renewable source of energy to power mills instead of fossil fuels. That is why sustainably managed forests is so very important – every fiber counts.

Many manufacturers in the U.S. do not directly own or manage forestlands and are thus fully dependent on outside suppliers for wood fiber. Utilizing third-party certification programs helps to assure manufacturers and customers that forest management and logging oper-

ations adhere to responsible forestry practices, including prompt regeneration and reforestation. However, only about 11 percent of the world's forests are certified, so manufacturers should make sure they are using responsibly sourced wood by abiding by programs like the Forest Stewardship Council® (FSC®) Controlled Wood and the Sustainable Forest Initiative® (SFI®) Fiber Sourcing Standards.

These programs require chain-of-custody certified manufacturers to implement rigorous tracing procedures and due diligence systems to demonstrate that all non-certified wood fiber in their supply chain was harvested legally and avoids controversial sources. The SFI Fiber Sourcing Standard also requires evidence that all wood fiber originates from responsibly managed forests and was procured by trained loggers in adherence to best management practices. SFI-certified companies must support landowner outreach and education efforts and investment in forest research for the greater good and landscape-scale conservation outcomes. This is one way to make sure a business is making wise purchasing decisions that reflect sustainability principles.

New ways of sourcing and managing resources sustainably are being explored at every stage of production.

2. Recycle; Repurpose; Reduce Waste & Inefficiency

Incorporating recycled content and recovered fiber into paper products is one way that manufacturers may potentially reduce their environmental impact – as long as they're not using more energy in the process. The material must be sourced responsibly, and the full environmental impacts of manufacturing and processing the material must be considered to ensure it is being put to its most efficient use.

Recovered fiber, as defined by the Environmental Protection Agency (EPA), includes both post-consumer fibers (paper, paperboard and fibrous products that have been used by consumers and recycled) and post-industrial fibers (scrap materials leftover and reclaimed from industrial uses that have never reached consumers), but the level of manufacturing and processing needed for each type can vary. Paper is not monolithic; certain paper grades and even certain mills are better suited for using recycled fiber than others. There are vast differences between processing recycled fiber for recycled packaging applications versus doing so for premium papers. It is important that manufactures put recycled fiber to its best use and ensure the fiber is used where it makes the most economical and environmental sense.

Byproducts of manufacturing can be put to practical use as well, such as boiler ash from burning wood for fuel. Rather than simply adding tons of ash into a landfill, where it decomposes and produces methane, a greenhouse gas with a higher global warming potential than CO2, that ash can be repurposed into a fertilizer or soil amendment. By distributing it over low pH soil along with lime mud byproducts, it can help farmers grow their crops.

Every part of the tree can and should be utilized whenever possible. Not only do manufacturers reduce their environmental impact and become a force for good in preserving the ecosystems around them – it also makes good business sense.

3. Adopt a Circular Economy Model

Circular economy models place an emphasis on restoration and regeneration. Pulping involves separating the fiber in wood from the lignin, a gluey organic polymer found in plants and wood. The fiber is used to make paper, but the lignin has many other uses that manufacturers can take advantage of. It can replace fossil fuels as an energy source, along with hemicellulose, cellulose fibers and leftover wood chips. Lignin is also an excellent binding and dispersing agent and can be utilized as a component of biodegradable plastic, plywood, pastes and glues, dust suppressants, soil stabilizers, and cement and asphalt products.

This circular process requires a change in perspective; assessing the full life cycle of your product, from the original raw materials used to final disposition of the product at the end of its useful life, perhaps ready for another use as part of a different product altogether. Making a concerted effort to efficiently manage the materials you use, and recycle them whenever possible, will be a benefit to the surrounding environment and community. And, not only is this clearly more beneficial to the ecosystem but repurposing waste and generating your own fuel sources can be profit-saving. Sustainable solutions are good for the environment, society and your business.

All of the above practices taken together form a holistic view of sustainable paper and packaging production that manufacturers should strive for. It starts with the materials you use; continues in how you utilize those materials with traditional and innovative manufacturing practices; and comes full circle in how you reinvest back in the environment. It is possible to utilize renewable energy for a variety of mill sizes, to use almost every part of the trees you harvest, and to create paper products that are high-quality and sustainable. Companies need to have a long-term vision of success in order to have a long and profitable future. ■

About the Author

Heather Pelletier is the director of brand management at Sappi North America. She has been with Sappi for over twenty years, with expertise in engineering and operations as well as product development and marketing. She is now responsible for managing Sappi's North American packaging brands and product improvements, in concert with the sales and marketing, manufacturing, and R&D divisions.

SNACK FOOD PACKAGING IN FOUR EASY STEPS

WHEN PURCHASING YOUR NEXT VERTICAL FORM FILL SEAL MACHINE, CONSIDER FORMAT, CHANGEOVER, SPEED AND SERVICE

By Chris Higgins, regional sales manager for Matrix Packaging Machinery

Selecting the right form fill seal machine for your snack packaging application is not a matter of luck. That's true with any major purchase; you must research different machine styles, evaluate vendors, solicit recommendations and input from colleagues, read topical articles, watch videos of machinery in action, as well as review any other form of comparative analysis.

The key is to perform your due diligence, which includes evaluating factors such as format, changeover, speed and service. When properly coordinated, these four components will help ensure your machine will meet production goals – and ultimately moving snacks off the shelf and into shopping carts.

Format

For paper and packaging manufacturers, A successful project requires a thorough understanding of the variables that are involved in your snack packaging line… and that starts with format. Presentation is everything; you need to get eyes on your products, and nothing does that better than stand-up pouches. In the past several years, stand-up pouches have become a go-to choice for many snack food manufacturers due to their attractive presentation. Flexible packaging allows stand-up pouches to be better displayed on shelves with an unobstructed view of the product. When paired with colorful, eye-catching package designs, stand-up pouches stand out when displayed on store shelves.

Now, compare a stand-up pouch to a snack food packaged in a round plastic tub. For starters, you can't stock nearly as many round tubs on a shelf as you can with a stand-up pouch. And since the tub is round, you lose part of the facing, in other words, the product's messaging may not be fully received. Also, the material costs for plastic tubs are more than flexible film on a per-item basis, and its circular shape leaves a lot of open, wasted space in cases during shipping; fewer tubs per case means increased shipping costs.

Another point in favor for flexible packaging is now being seen in two offshoots of the COVID-19 pandemic. As the recent lockdown kept many people inside, we've seen a noticeable uptick in sales of snack food packaged in larger, bulk-sized stand-up pouches. This trend seems logical as people looked to limit trips to the grocery store, buying larger packaged items to last longer. But as lockdown orders are now being lifted, some snack food manufactures are increasing production of individual portion size packaging to avoid people sharing with others as a safety measure. For packaging these smaller bags, food manufacturers are employing bag-in-bag applications. This can be accomplished with dual form fill seal machines. A forming tube up top makes the individual-size bags, and then they drop into a larger, master bag. These bag-in-bag snack food products are typically sold in warehouse club stores and larger grocery stories.

Changeover

As more regional, niche snack food brands pop up, the forecast for co-packers looks promising. That's because as new brands get started, they often turn to co-packers to fill their orders. Fulfilling multiple short-run orders means co-packers perform numerous changeovers on their equipment. Being able to run a broad range of dried, salty or sweet snack foods with different films and bag sizes through the same machinery is key to fast, flexible production.

Changeovers used to be a time-consuming endeavor, but not anymore. Well-designed form fill seal machines have taken much of the guesswork out of changeovers, and most can be accomplished in less than 10 minutes. Servo-drive technology increases changeover accuracy to 1/1,000 of an inch, automatically making the necessary adjustments. All an operator needs to do is replace the forming tube with the new one and load the correct film. This saves not only changeover time, but money with reduced film waste.

Matrix's vertical form fill seal machine, Mercury can increase productivity and has a small footprint.

Speed

While some form fill seal machines tout speeds up to 200 bags per minute, you really need to evaluate your entire line and determine the actual speed range you need from your machine. To do that, you need to look at the whole picture, and know what's happening to your product before it arrives at the bagger, as well as its destination after it's been packaged.

If you can accommodate up to 200 bags per minutes, servo-driven continuous motion form fill seal machines are the perfect solution. The secret to these next generation machines achieving these rates is a high-speed jaw system that doesn't stop throughout the cutting and filling process, allowing for maximum dwell time on sealing for faster speeds and accuracy. The continuous-motion design is ideal for films that require longer seal times, such as multilayer laminate, foil-lined films.

If your application is more in the 90 bags per minute range, then an intermittent form fill seal machine is a good choice. The word intermittent is used to describe the split-second pause in the bag-making process. These machines are tried and true, with years of reliable service to their name. There are several machine styles available to best match your application.

Service

Service is probably the most important of the four components in form fill seal machines. Maintaining and keeping your machine running efficiently is one of the more crucial issues that can affect your production. Machines that are not maintained or routinely supported by your team can run into issues. And we all know what happens when this occurs…your entire packaging line comes to a quick halt. If that happens, knowing you've got someone to back you up is important. How fast can you obtain replacement parts? Are the parts readily available from an industrial supply company, or are they custom-made from your machine's manufacturer? Hopefully not the latter, as that could take extra time in receiving new parts.

Bottom line is anyone can sell you a machine, but for best results, you want to select a partner who will be there for you long after the installation is completed. Do they offer consumable parts kits to make ordering easy and cost effective? Are they innovative and

Morpheus Series servo driven intermittent or continuous box motion baggers from Matrix.

looking for a long-term customer relationship? The right form fill seal machine will produce bag sizes in the desired format, offer fast change-overs, provide the necessary speed, and its manufacturer will be there with you long after the installation is completed. When you have those four components, you've got the right combination for a long-term packaging solution and a promising partnership. ■

About the Author

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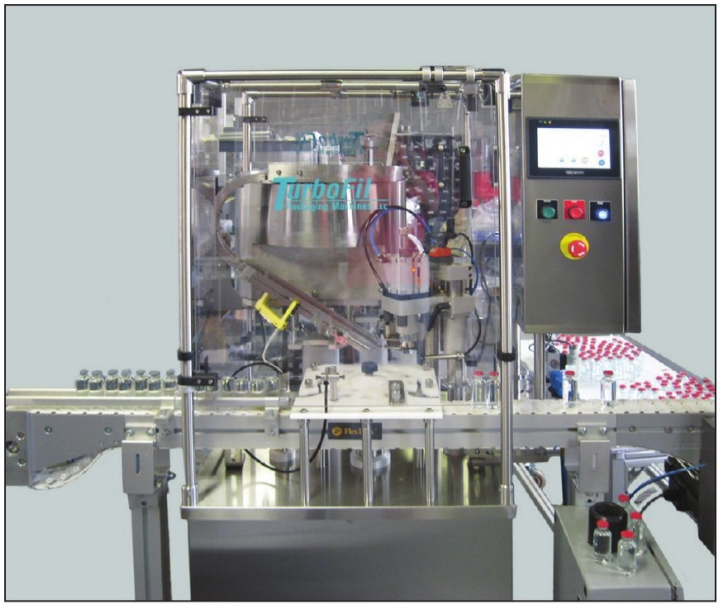

TurboFil Introduces Lineup of Semi- and Fully-Automatic Vial Crimping Machines

TurboFil Packaging Machines LLC, has introduced a lineup of semi- and fully automatic vial crimping machines. Offering a clean, consistent crimp for the full gamut of manufacturing applications – from R&D through scale-up and large-batch production – the CrimpTech series utilizes a four-jaw collet approach to ensure safe, dependable sealing.

TurboFil's crimpers can reportedly handle vials in a wide variety of shapes and sizes, and feature easy, toolless change-over for simplified operation and minimized downtime. The fully automatic version can process up to 50 containers per minute, with caps fed via a stainless steel vibratory feeder. The unit's novel approach to cap placement and crimping ensures each item is stopper-tamped prior to crimping for a reliably level seal.

Each unit in the CrimpTech series provides low particle generation – a key facet for crimping equipment. The three-model lineup includes:

- The CrimpTech Benchtop is a semi-automatic unit whose ability to be placed under laminar flow hoods makes it ideal for aseptic and cleanroom applications. Suitable especially for R&D and pre-production efforts, the lightweight, fully portable unit is simple to maintain and exceedingly cost-effective;
- The CrimpTech Standalone is an automatic tabletop module where pre-stoppered vials enter and exit via tray. The reliable unit reportedly offers fast, simple collet changeover for different cap styles or, for vials of various diameters, fast star wheel replacement; and
- The CrimpTech In-line is an automatic crimper that can connect to various other units along a packaging line. Like the automatic Standalone, the In-line also reportedly offers fast, simple collet changeover for different cap styles or, for vials of various diameters, fast star wheel replacement.

For more information, visit www.turbofil.com.

Nature's Baby Organic Switches to Eco-Friendly, Child-Safe Aluminum Packaging

Nature's Baby has taken its eco-friendly commitment one step further with the release of aluminum packaging options for seven of its best-selling products.

Nature's Baby is reportedly committed to eliminating or minimizing the use of harsh or suspect chemicals in baby bath and skincare products with formulations using the highest quality and most effective natural and organic ingredients. Keeping in line with its commitment to natural, eco-friendly practices, the company has long sought to minimize use of plastic packaging from its line-up, due to the difficulties in recycling and its extensive breakdown period.

One hundred percent recyclable for an infinite number of cycles, aluminum packaging is typically made of 68 percent post recycled materials and it takes just 8 percent of the energy to produce recycled aluminum as it does to create new aluminum, leaving far less used waste in landfills. While pricier than plastic or glass, aluminum is light and shatter proof, making it the perfect choice for Nature's Baby packaging.

Nature's Baby has made the switch to aluminum packaging for three of its most popular shampoos, three conditioners, and one baby lotion.

For more information, visit https://naturesbaby.com.

Multi-Converyor's Modsort Roller-Top Belt Integration

Multi-Conveyor introduced its Multi-Conveyor systems incorapted with ModSort® technology by System Plast®. The ModSort can transfer, sort, divert, left justify, and right justify, and it works with all shapes and sizes.

Key features of the ModSort by System Plast include: easy

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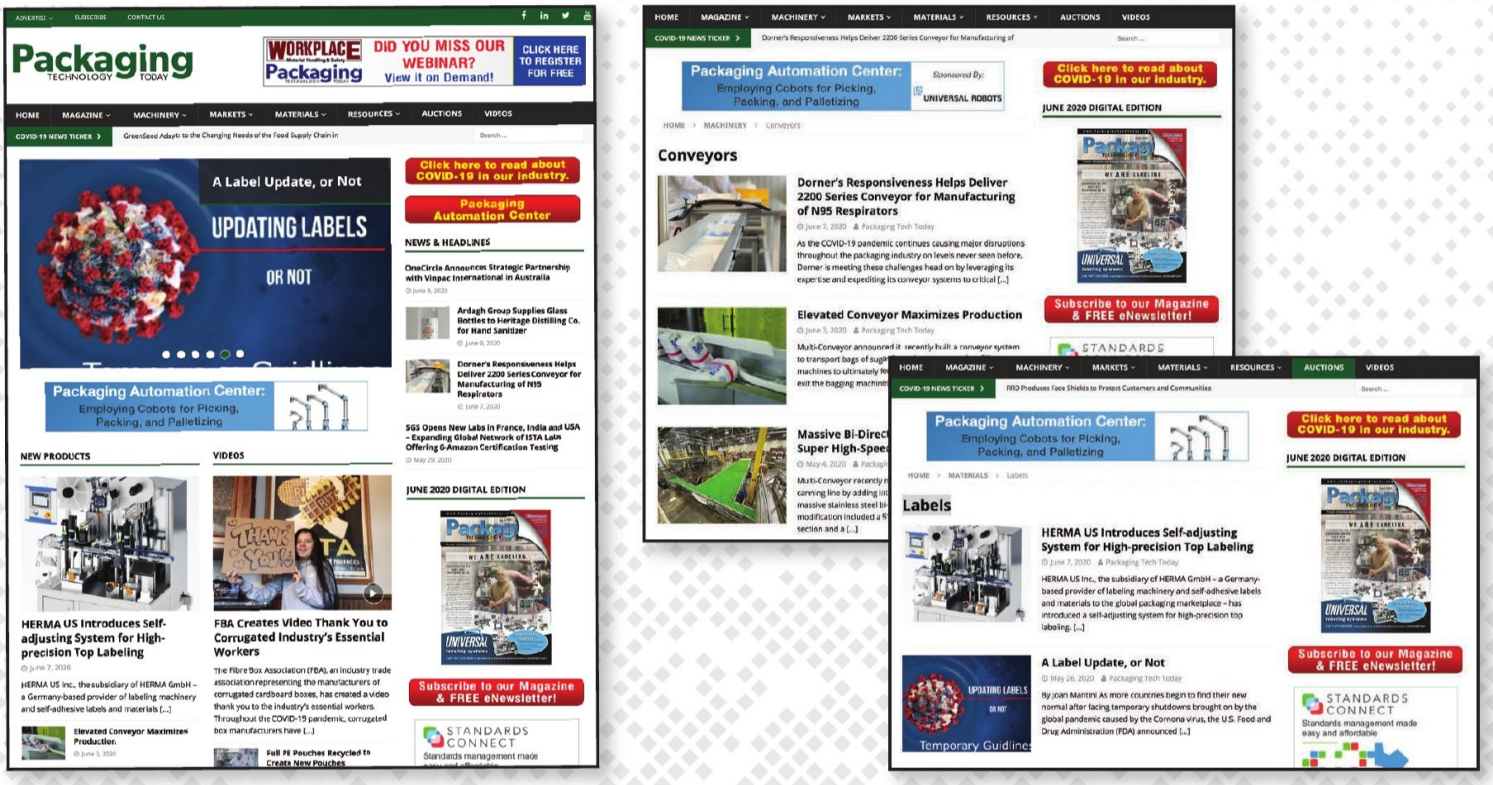

Machinery

- Caps & Closures
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integration, programmable, no noise, low voltage and safety.

The ModSort uses a System Plast roller-top belt with spheres on 1-inch centers that provide the capability of omnidirectional control of products being transported. The roller top belt is powered by a 24 VDC motorized driven roller in direction of travel, while a divert belt with similar drive is located below the spheres and runs perpendicular to the top belt in either direction.

The result is the ability to combine the two belt motions to create a divert on the fly for the product at a designated vector angle left or right, or if the roller top belt is stopped the product can be diverted at 90 degrees.

As one of the leading roller top chain conveyor manufacturers, Multi-Conveyor incorporates the licensed, certified, and/or officially trained roller belt technologies on its equipment. The company brings the benefits of modular plastics to complex package handling processes like sorting, merging, and aligning even small items. The result is a simplified, safer, cost-effective solution for product orientation and control.

For more information, visit www.multi-conveyor.com.

New Packaging For Toilet Cleaners: Less Plastic and More Recycled Material

With a new, global packaging concept for toilet cleaner bottles, Henkel is underlining its commitment to sustainable packaging and the promotion of a circular economy. The amount of recycled polyethylene (PE) in the packaging of toilet cleaner gels has been significantly increased – reaching 50 percent for toilet cleaners in the standard range and, in the case of cleaners from the Pro Nature range, as much as 75 percent.

Not only does the new packaging concept include more recycled plastic, but also less plastic overall. This reduces the weight of the bottle by 11 percent. This packaging innovation saves 480,000 kilograms of new plastic per year. This corresponds to a saving of 800 tons of CO2 annually. The compact bottle design reportedly allows around 10 percent more bottles to fit on a transport pallet. In addition to the increased use of recycled materials, this has a positive effect on the ecological footprint.

With the new packaging concept, Henkel has introduced a

standardized bottle body design for toilet cleaners worldwide. All bottles are now available in a uniform format and have polyethylene as a material. The products have been available in stores since January.

The new toilet cleaner bottle thus contributes to Henkel achieving its ambitious packaging targets. The company is working towards the ambitious target to reduce the amount of virgin plastic from fossil sources in its consumer product packaging by 50 percent by 2025. By 2040, Henkel aims to be a climate positive company.

For more information, visit www.henkel.com.

Neopac Launches Online Shop for Digitally Printed Tubes

Hoffmann Neopac has launched a direct purchase microsite for DigitAll360°, its recently introduced digital tube decoration service.

The new marketplace walks tube customers through an intuitive process that includes downloadable design guides and templates, an initial portfolio of stock tubes from 50-200 milliliters in volume, simple artwork uploads 3D renderings and a comprehensive pre-purchase artwork check.

DigitAll360° Online shop was developed to meet the demands of beauty start-ups, fast-tracked projects of larger companies, and the needs of contract manufacturers or small-quantity pharmacy orders.

Available for a wide variety of substrates and almost unlimited color palettes, DigitAll360° benefits include:

• Unparalleled all-around decoration: DigitAll360° offers

complete decoration with no slit or overlap, and also delivers outstanding seam and shoulder printing. On-cap decoration capabilities also will be added to the Digital360° marketplace in the near future;

- Unprecedented digital color matching: DigitAll360° can employ up to 7 simultaneous colors with white and glossy lacquer at up to 600 DPI resolution. This ultra-wide color gamut and micron-level color registration yields photorealistic images and superb color matching ideal for half-tones, gradients and other special hues;
- Digital-level variability: from mosaic printing, promotions and prototypes to packages printed in different languages, DigitAll360° offers unsurpassed versatility;
- Quick delivery: Neopac can deliver DigitAll360° products on short lead times, a consistent industry challenge for printing with this level of style, sophistication and brand impact; and
- Increased Sustainability: from initial decoration to product manufacturing to consumer recycling, DigitAll360° delivers major sustainability enhancements and reduces environmental footprint throughout product lifecycles. Offering a mono-material PE tube portfolio, digital printing also helps lower resource waste and consumption as well as energy and chemicals usage.

For more information, visit www.neopac.com.

METTLER TOLEDO's CV3570 Combichecker Inspection System Provides Vision Label Inspection and Checkweighing in One Solution

Pharmaceutical, food, cosmetic, household chemical producers and contract packagers with limited factory floor space can now benefit from product label inspection and checkweighing at high throughputs using the new METTLER TOLEDO CV3570 combination inspection system.

AD INDEX

The system offers accurate weight measurement and high-performance label inspection in one compact machine. This system reportedly helps manufacturers and packagers ensure accurate product weight, comply with labeling guidelines and weights and measures legislation, and minimize product rework, retrieval and recovery.

The CV3570 system combines METTLER TOLEDO'S innovative C35 checkweigher platform with the capabilities of METTLER TOLEDO machine vision technology. The combined technology simultaneously measures product weight and performs multiple inspections of the label's crucial information – the product identification number, expiration date, and lot number – ensuring compliance with both weights and measures and product identification regulations. Its compact footprint and a single reject mechanism for both inspection technologies help shorten the production line, optimizing use of factory floor space.

The CV3570 can reportedly handle large package sizes, big inspection target areas, and multiple product inspections. This gives manufacturers the flexibility to both weigh and inspect the labels of products with a wide range of widths, lengths, and weights.

The system features METTLER TOLEDO CI-Vision's CIVCore® 11 software, which offers precision analysis of high-resolution images at up to 250 ppm. The checkweigher's sensitive weigh cells and high-performance software deliver accurate weight measurement at high speeds. This combination optimizes detection rates for defective products without compromising line productivity.

Its easy-to-use touchscreen display, intuitive dropdown menus and graphic toolbars simplify the set-up process for product changeovers, enhancing flexibility and boosting production uptime.

The CV3570 system also features an easy-to-clean open construction, with sloping surfaces and tubular framework to minimize dirt traps, and a robust stainless-steel cabinet to protect internal mechanisms from water or dust ingress.

The hygienic capabilities ensure that manufacturers can maintain the high standards of sanitation expected on pharmaceutical and food production lines.

For more information, visit www.mt.com.

Valvoline Leads Packaging Innovation with Launch of FlexFill

Valvoline Inc. announced the retail launch of its newest gear-oil packaging innovation, FlexFillTM. The patented FlexFill bag will make changing synthetic gear oil easier, all while providing a more flexible, less wasteful automotive Do-It-Yourself (DIY) experience.

FlexFill packaging is available in two synthetic gear oil grades, SAE 75W-90 and SAE 75W- 140, and can be purchased at various retail outlets nationwide, including Advance, AutoZone Meijer and Walmart, as well as on Amazon.

For more information, visit www.valvoline.com.

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