

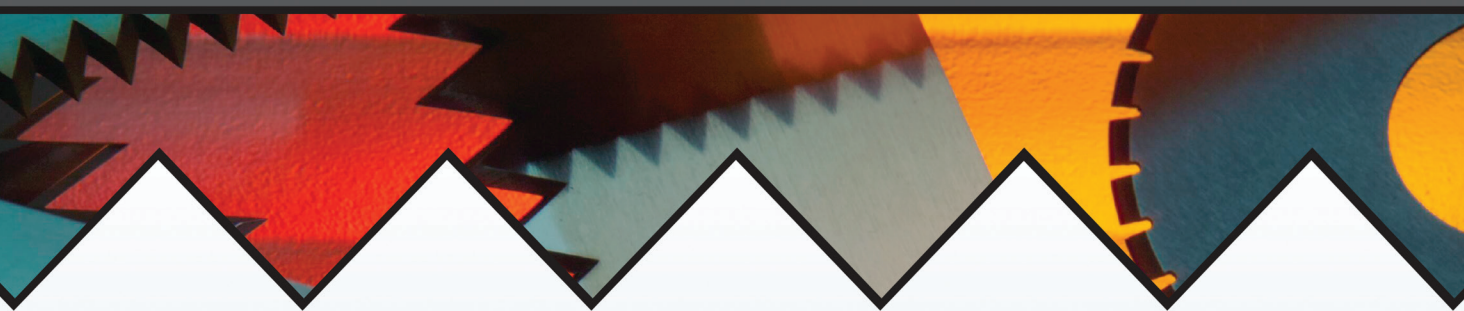
October 2021

Packaging

TECHNOLOGY TODAY

Trends, Solutions and Package Innovations of Today

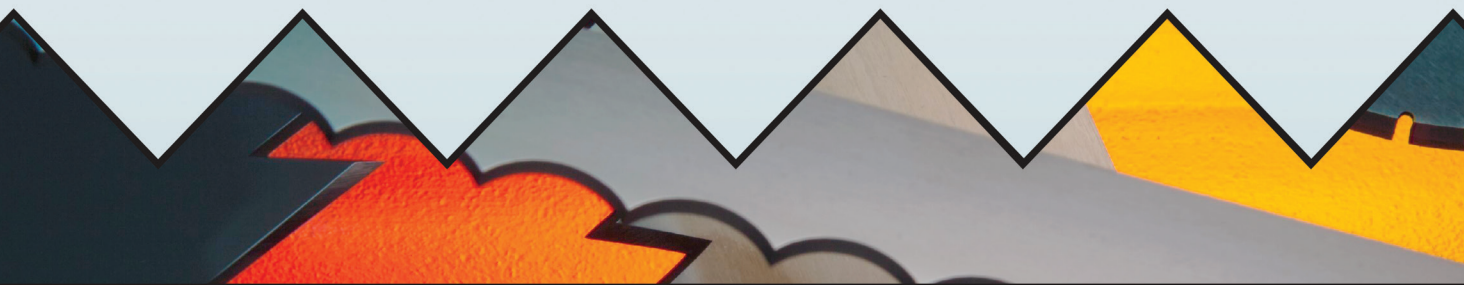
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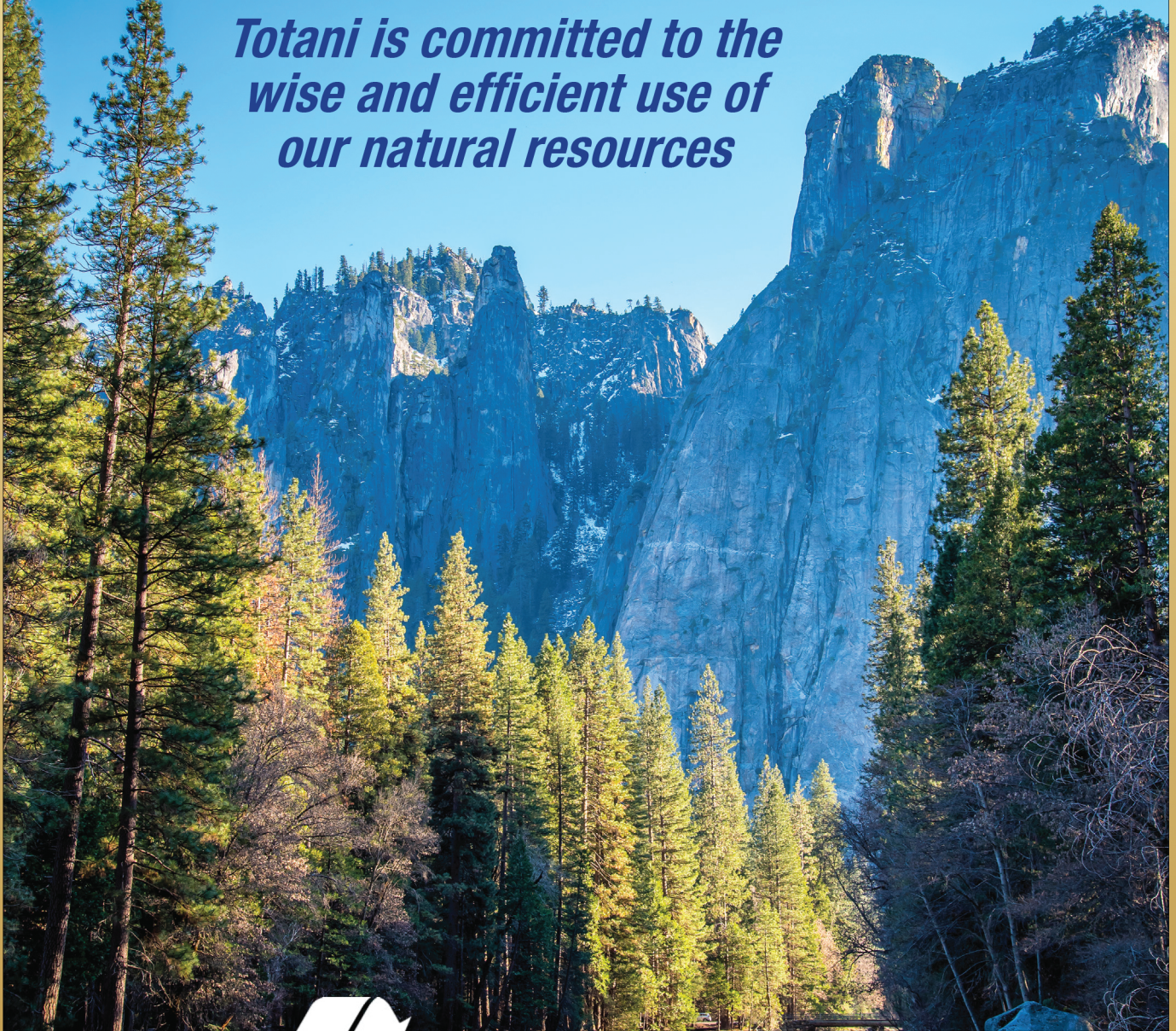
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EDITOR'S NOTE

Flexin' in the Future

Pack Expo 2021 has just come to an end. What was most noticeable throughout the show you ask? It should come as no surprise that the packaging industry is continuing to invest in smart automation and more eco-friendly solutions, and chances are you could see one or the other (if not both) at every booth.

Aside from smart automation and eco-friendly solutions, a few of the things I have been keeping a close eye on this year included:

- **Safety** – With robots being the future of manufacturing and the popularity of cobots continuing to rise, companies brought forth automation solutions in safety such as robot vision, safe robotics, and other new inspection and detection technologies across the packaging board at Pack Expo 2021
- **Flexible packaging in the spotlight** – Flexible packaging has also opened up new options for automation, which was also a common theme at the show this year.
- **Augmented Reality (AR)** – AR is a segment of packaging that is indeed gaining attention as a way for brands to better engage consumers. With brands like Coca-Cola One and Pizza Hut diving into AR, this is one that will keep expanding beyond 2021.

• **Weight reduction** – A great way to save money and become more eco-friendly is in packaging weight reduction. Lightweighting is gaining attention. As the eCommerce market grows, so too shall weight reduction innovations.

Lots to see at Pack Expo this year, with so little time. If one of our representatives did not have a chance to stop by, or you couldn't make it to the show this year, I'd like to share with you our 2022 editorial calendar. Feel free to message me and we can work out how you or your company can play a role as a thought-leader in our 2022 editorial line up.

Take care,

Joan Mantini
586.295.1888
Joanm@rdgmedia.net

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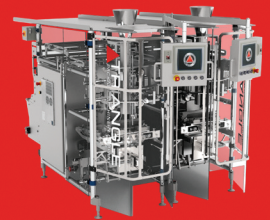
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PRESIDENT/PUBLISHER

Randy Green . randy@rdgmedia.net
586-227-9344

INTEGRATED SALES MANAGERS:

Scott Franz . scott@workplacepub.com
937-550-4055

EDITOR

Joan Mantini

ACCOUNTING MANAGER

Kristen Green . kristin@rdgmedia.net
586-242-8397

PACKAGING/IMS AUCTIONS

Angi Hiesterman . angi@rdgmedia.net
515-351-7973

OPERATIONS/CUSTOMER SERVICE

Jody Kirchoff

ART DIRECTOR

Jake Needham

Web Design

Josh Scanlan

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COVER STORY

8 Three Reasons for Automating Your Stretch Wrapping Capabilities

Learn the three factors that are hard to overlook when making the decision to upgrade to an automatic stretch wrapper.

FEATURES

10 Today's Checkweighers' Expanded Capabilities are Making Them Essential Productivity Tools

A look at how modern checkweighers have evolved far beyond being simply devices.

12 Flexible Packaging With Purpose: Green Innovations Underway for the Format

Find out how working with the right partners can allow your brand to move to a more sustainable material option safely, and quickly.

16 Packaging Solutions That Help Consumers Snack Safely

Discover the trending factors in snack food packaging that brands are paying closer attention to.

20 A More Convenient and Sustainable Market for Flexible Packaging

A closer look at the factors playing a role in the post-COVID world, for the projected growth of the flexible packaging market.

DEPARTMENTS

- | | | | |
|---|---------------|----|-------------------|
| 4 | Editor's Note | 26 | Supplier Products |
| 4 | Online TOC | 31 | Ad Index |



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THREE REASONS FOR AUTOMATING YOUR STRETCH WRAPPING CAPABILITIES

By Pat Pownall, Director of Sales at Orion

Stretch wrapping is an area of the packaging process that tends to get overlooked at times...and it's easy to see why.

Applying stretch wrap is literally the last step before those pallets are loaded onto tractor-trailers for delivery. For some, just getting stretch wrap around the product a few times is good enough. But is it?

When it comes to stretch wrapping, there is a much better method. Automating your stretch wrapping processes will not only save you money in the long run. But will help get your loads from Point A to Point B safely and securely? There's no reason to settle for good enough when better, more cost-effective options are available.

The Downside of Hand Wrapping

For most manufacturers, packagers and distributors, keeping costs down is a major concern, and one of the more significant unplanned costs is returned products. Unfortunately, their stretch wrapping can be contributing to that problem.

For example, you've just loaded several poorly wrapped pallets onto a tractor-trailer for delivery. Miles down the road that semi swerves on the interstate to avoid an accident, and dumps the entire load inside the truck. The driver doesn't realize the damage until they raise the cargo

door; that load cannot be delivered and now needs to head back to your facility. Your customer isn't going to pay for that – you are.

Another way poor stretch wrapping practices could be costing you money is through injuries. Many companies still hand wrap pallets, but this is a very inefficient method of wrapping. Repeatedly bending over or twisting to hand wrap pallets can lead to painful back strain injuries; that employee is now off the job and costing you money in lost production, medical bills and workers compensation claims. For employees hand wrapping, it's not a question of if they're going to get injured, it's when.

In addition to injuries, hand wrapping pallets leads to inconsistent wraps due to individual strength or fatigue. An employee at the start of their shift will likely wrap a pallet a bit tighter than at the end of their shift, especially if they've been doing it all day. That person has been bending over all day, going around pallets and getting dizzy – it stands to reason that their wraps simply won't be as safe and secure as they need to be.

Automatic Stretch Wrapping

Upgrading your stretch wrapping capabilities through automation gives you safer and more secure loads, while also reducing the risk of injuries. These two factors alone will save you money in the long run. But, so will film reduction, which is another benefit of automatic

stretch wrapping equipment.

Film is designed to be stretched when wrapped around a load. By stretching the film and applying it to the load, it acts as a rubber band keeping the product tight and secure. When film is applied by hand, a person at the beginning of their shift may be applying 100 percent stretch to the film (that percentage drops as fatigue sets in). While that percentage may seem impressive, it doesn't compare well to automatic units that typically wrap with pre-stretching film at 250 percent. A pallet that's wrapped with film pre-stretched to 250 percent uses less film than a pallet hand-wrapped at 100 percent; the film savings is even greater as that pre-stretched percentage is even lower. Being able to achieve a consistent 250 percent pre-stretch film on each and every load, month after month, uses less film, saving more money in the long run.

Further demonstrating film savings is seen through reducing what's called the neck down effect. As film is stretched, it tends to narrow; this action is called neck down. For instance, when automatically applying a 20-in wide film, by the time the film comes in contact with product on the pallet, it's been narrowed on average to about 16 ½-in. You've paid for 20-in., but you've lost 3 ½-in. This is now going to take extra film to properly wrap the pallet.

However, the design of some automatic stretch wrapper machines works to reduce the amount of neck down to about 18 ½-in. on a 20-in wide roll of film. The benefit here is that it gives you more coverage and contact with the pallet, reducing the amount of film needed to wrap it.

Getting Started: End-of-Line Audit

Deciding to automate your stretch wrapping capabilities is a great way to begin saving money. However, this is just one specific area. There may be more opportunities to upgrade other sections of your



The patented “S” design on Orion’s InstaThread Pre-stretch Film Carriage saves up to 15% on film per load – a sizable savings to help offset the rising cost of film seen over the past year.



Turntable pallet wrappers is a popular style that wraps pallet loads quickly and efficiently.

end-of-line packaging as well. A reputable OEM supplier can come in and perform an audit of your entire packaging line. An audit not only analyzes your current stretch wrapping processes, but also examines how product arrives to, and travels through your end-of-line system.

A key component of a packaging line audit is asking why. Being able to uncover reasons why something is done the way it is can be very telling in learning not only about their packaging line and the rationale of how things accomplished, but also a company's culture. Sometimes an audit can uncover an area of inefficiency upstream that's affecting productivity at the stretch wrapping cell. The goal is to review the entire end-of-line system and based on a company's sales and production goals, recommend the best course of action to meet those benchmarks.

Automation is lending a helping hand to many areas of packaging, and stretch wrapping is certainly one of them. The decision to upgrade to an automatic stretch wrapper will provide you with safer and more secure loads, reduce potential injuries and give a quality return on investment that's noticeable to the bottom line – three factors that are hard to overlook. ■

About the Author

Pat Pownall is the director of sales at Orion, a ProMach brand. He can be reached at 309-360-1665; Pat.Pownall@promachbuilt.com; www.OrionPackaging.com.





TODAY'S CHECKWEIGHERS' EXPANDED CAPABILITIES ARE MAKING THEM ESSENTIAL PRODUCTIVITY TOOLS

MODERN CHECKWEIGHERS HAVE EVOLVED FAR BEYOND BEING SIMPLY WEIGHING DEVICES TO ALSO BEING INTERACTIVE PRODUCTIVITY CONTROL DEVICES ABLE TO MONITOR THEIR OWN AND OTHER SYSTEMS' PERFORMANCE.

By Keri Klein, Checkweighing Product Manager at Mettler-Toledo Product Inspection

Many years ago, product inspections were carried out by employees who viewed packaged products as they passed by on the production line and removed those with gross errors like cocked caps, missing labels, etc. It was a start, but notably inefficient. Today, the work of inspection is done by sophisticated systems that have replaced eyes with cameras and hands with automated reject devices.

The earliest of these modern inspection systems that were introduced were checkweighers, devices that weighed each packaged product to ensure that its weight matched what was stated on the package label. Today, it is a rare processing or packaging production line that does not include

at least one checkweigher, but the functions those systems perform have greatly increased.

Modern dynamic checkweighers are best known for their ability to instantly weigh a package moving at production line speed to an accuracy level of within 2 grams. What is less well known is that the days are long gone in which the sole purpose of a checkweigher was to determine the weight deviation of a product. Today, a checkweighing program matched to the production process it is part of plays a comprehensive function that includes both protection and safety, but can also directly affect productivity—and therefore has huge commercial significance.

Filling control

By weighing 100 percent of filled packages accurately, even on a fast-moving production line, a checkweigher provides a quality assurance control over the performance of an upstream filling system. If packages are detected to be underfilled by even a few grams, regulations are being violated, putting the company at risk; if the filler is overfilling by a few grams, it is giving away valuable product. The checkweigher provides necessary and reliable confirmation of the filler's real time performance.

As checkweighers evolved, they acquired the ability to be programmed to alert line operators when they detected a preset number of sequential over- or under-fills, so the filler could be quickly adjusted and further risks or losses controlled. Today, in state-of-the-art IIoT integrated production lines, more of which are coming online every day, the checkweigher delivers even greater efficiency, communicating directly with the filler's controls to adjust the filling rate to compensate for the results it is measuring.

Self-evaluation, guided maintenance and data collection

As measuring technologies have evolved, digitization has become a core element of innovation. For example, many businesses have made the shift from analog signal transmission to end-to-end digital data transfer. As a result, an intelligent checkweighing device provides more than just accurate measuring values. It provides qualified real-time status information about the manufacturing process, including its own operational status.

The data the device provides enables the initiation of preventive maintenance actions before problems due to wear or strain begin to occur. This keeps production

running smoothly, avoids downtime and enables needed repairs to be done when it will least interfere with production. Checkweighers today are built more future-proof, providing a modular design that enables upgrading. If a replacement checkweigher is required, current technology makes the integration of new or replacement checkweighers automatically into both production line control systems and company data collection systems simple and efficient.

Checkweighers also collect data on the packages they are weighing and inspecting—total inspections, number of rejects, number of over- and under-weights, etc.—and transmit it to a central data storage location. From there it can be recalled when needed during an FDA facility visit, or to be analyzed to support the user's Continuous Improvement program.



The C35 with Product Data Check 360 provides a reliable, space-saving solution that weighs and accurately verifies label content, prevents label mix-ups and verifies 1D or 2D barcodes or alphanumeric text.

Maximizing the advantages

As a result of these new expanded capabilities, and the significant effect they have in minimizing downtime and maximizing productivity, checkweighers today are having as important an impact on packaging productivity as they did when they were first introduced into production lines to replace human inspectors. Manufacturers of weight-sensitive products such as packaged foods should evolve as well, to take advantage of the new capabilities.

As checkweighers have evolved from being solely dynamic weighing devices to being interconnected inspection systems, they have also become subject to what all technological systems face: the likelihood of being outperformed by a newer version. The launch of IIoT and Industry 4.0 operations have accelerated that, as all systems in

an integrated production line face more demands on their performance and communication capabilities.

For those companies using today's expanded checkweighers, the result is expand-

ed line integration, information sharing and greater value from what was once a simple weighing system. It also means, however, that those companies need to remain informed about other expanded capabilities that newer checkweighers can offer, to be able to continue to take full advantage of what those new capabilities offer. ■

About the Author

By Keri Klein is the checkweighing product manager at Mettler-Toledo Product Inspection.





FLEXIBLE PACKAGING WITH PURPOSE: GREEN INNOVATIONS UNDERWAY FOR THE FORMAT

By Rob Kalany, Senior R&D Manager at R.A Jones

Head to any grocery store today and the shelves are lined with them: consumer goods touting more ethical roots and a more ecofriendly footprint. Shoppers are looking to minimize their own impact on the environment and feel they are doing their part to minimize waste sent to landfill, and they turn to the brands they purchase to help them make those changes. From compostable food containers to cans made from recycled aluminum, many consumer-packaged goods companies (CPGs) are working tirelessly to answer the call and offer products in a format that creates less drain or stress on the environment. Countless brand giants are even making pledges to reduce the use of single-use materials and are aiming to adopt more recyclable packaging

options by 2025.

On top of this trending consumer and brand behavior comes regulatory factors such as the United States' recent rejoining of the Paris Agreement, which aims to limit the global temperature and the detrimental effects of climate change on various environments. These legislative actions and additional industry initiatives have created an overwhelming demand from consumers for brands to step up and demonstrate more active commitments to sustainability—but moving to a sustainable version of a product is not always as easy as a simple format swap.

Flexible packaging in particular presents a more complicated path to sustainability, as ecofriendly alternatives theoretically available to



The single-serve format in spices is simply held together by seals that run the perimeter of the package.

CPGs are not necessarily workable in practice. Knowing that meeting these challenges requires extensive retooling and revolutionizing, innovation experts at some OEMs are deep into the R&D stages of the next generation of flexible packaging equipment, uncovering the solutions that will help CPGs finally hit their stride in the years to come.

Challenges facing pouch packaging today

As with many packaging formats, flexible packaging are not candidates for a “quick fix”—a one-to-one replacement of materials. Despite material manufacturers bringing new films to market that seem to check the boxes—more recycling-bin-friendly materials or materials that are more energy-efficient to produce—those options present a whole host of challenges to CPGs once they are actually implemented along the production line.

Consider a typical flexible packaging product: a packet of oatmeal or hot chocolate, a sachet of spices or powdered drink mix. These products usually appear in a thin sleeve that is cut or torn open by the consumer. The single-serve format has no caps, lids or closures to speak of—it is simply held together by seals that run the perimeter of the package. While this design offers a lightweight yet durable product and a convenient opening experience for consumers, it also makes the machinability of the materials critical, as those elements serve as the only barriers protecting the product from becoming compromised.

Typically, many materials have a layered construction of aluminum or paper-based linings to add strength and durability to withstand heat treatment as it runs through the machine. While these formats work and allow the package to be filled, sealed and prepped for distribution, the industry is aiming to limit the layers and coatings applied

to the package, as these characteristics often make the package harder to recycle and reuse. This shift toward monomaterials, referring to materials predominately comprising one substrate type, is what has sparked the development of more sustainable material options.

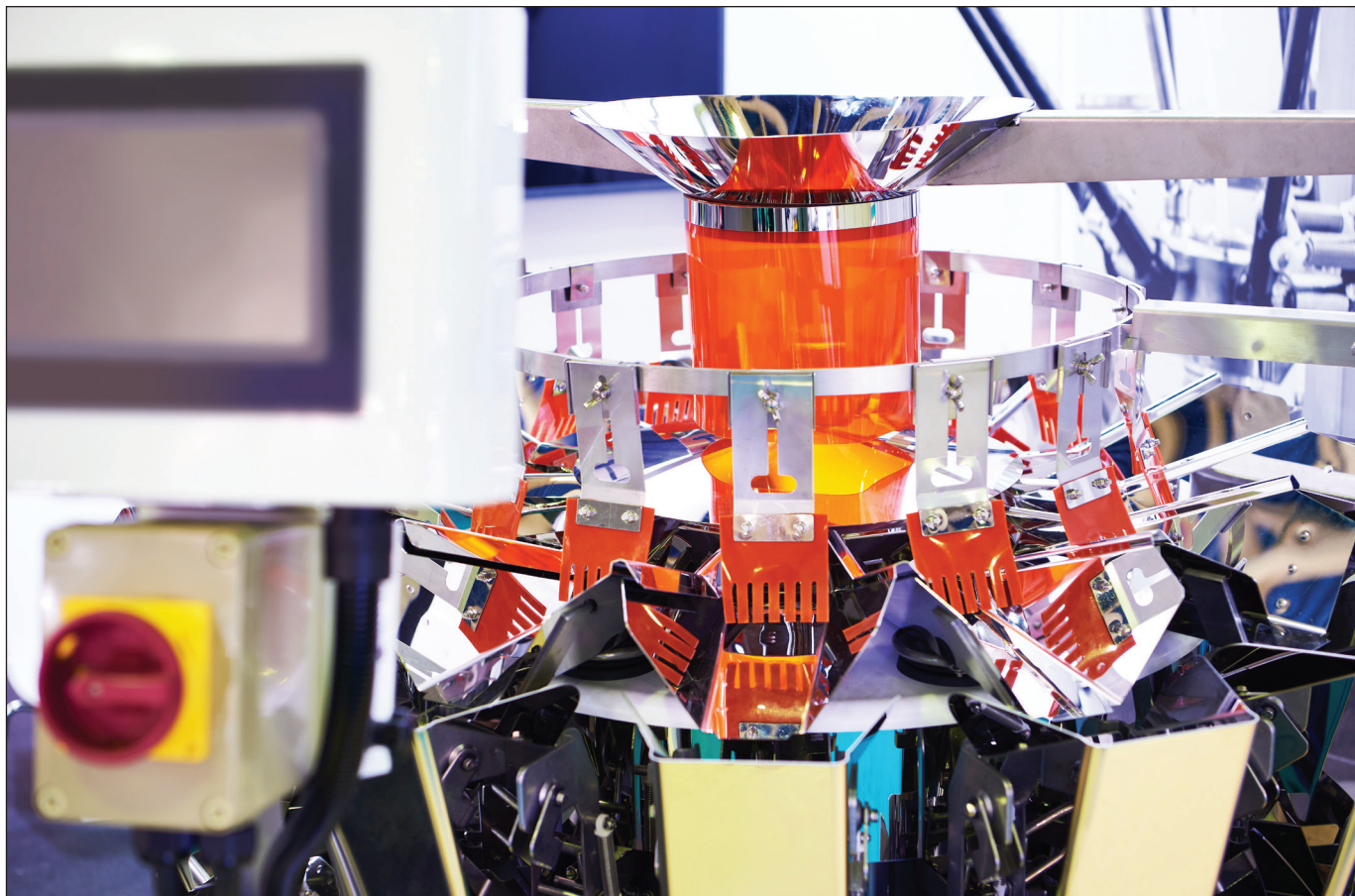
The problem? Many materials made from more ecofriendly blends cannot actually run properly on the high-speed pouch-filling and sealing equipment CPGs require to meet their production levels—meaning brand manufacturers are left with a green option that cannot actually accept product and make its way to the storefront.

From sealing stresses to potential solutions

Any material on high-speed flexible packaging lines must be able to accommodate the application of high heat to allow the materials to bond together and create a solid, gap-free, durable close. In this case, what makes the ecofriendly pouch materials shine—their lack of layers—become their biggest hurdle, as the films are too delicate to handle the heat and tension. The result is packaging that becomes stretched, shriveled or shrunken to the point where it is unusable.

When this distortion occurs, the manufacturer not only loses packaging material and the product it is designed to protect—a costly frustration—but is also victim to downtime as the machines must be paused or shut down while the damaged product is removed and the production line reset. The impact of this maintenance time not only wastes resources, but hampers output and overall efficiency.

In response to this production line conundrum, some industry-leading OEMs are hard at work engineering viable component changes and new technologies that can properly seal a package made from sustainable materials without damaging the product or compromising the package’s integrity. What these innovators continue to strive toward is the intersection of machinability—the packaging’s



Key innovators anticipate some groundbreaking ecofriendly technologies to emerge within the next one to two years in the flexible packaging industry.

suitability to be added to a line and function as required—and sustainability. In this sense, these OEMs are taking responsibility and placing the onus on themselves to accommodate more sustainable material options with equipment retooling, rather than the other way around.

Evolving equipment to strike the machinability and sustainability balance may take a few different approaches. Technical experts are examining options like rapid heat control or more intelligent, digitized heat control that can offer more sensitivity to the materials. Engineering is also in play to enable more efficient heat control, allowing equipment to lower temperatures faster, stop and start running easier and accommodate sustainable materials with different folds and features that may emerge as replacements to traditional laminated or layered elements. Together, these advancements may offer manufacturers a workable solution that meets production needs.

While these options are still in development and not yet available to market, key innovators anticipate some groundbreaking ecofriendly technologies to emerge within the next one to two years. In the interim, where CPGs can get a leg up is by connecting and collaborating with OEMs investing in the next generation of flexible packaging equipment. Working closely with the right partners will allow brands to share their individual flexible packaging product needs with an OEM and ensure that as they move to a more sustainable material option, they will have access to equipment that can safely—and quickly—move their goods to market. ■

About R.A Jones:

R.A Jones is part of Coesia, a group of innovation-based industrial and packaging solutions companies operating globally, headquartered in Bologna, Italy www.coesia.com.

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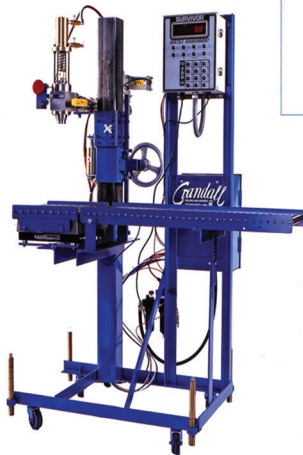
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PACKAGING SOLUTIONS THAT HELP CONSUMERS SNACK SAFELY

Marcos Vieira, Global R&D Director of Terphane

A trip to the supermarket or convenience store has changed in almost every way for consumers over the past year. Not only can patrons be seen wearing masks and gloves, continuing to be asked to stay six feet apart from one another, but are also looking at items on store shelves through a new lens. According to the International Food Information Council's (IFIC) 2020 Food and Health Survey, as many as 85 percent of Americans made changes in the food they eat or how they prepare food because of the COVID-19 pandemic.

As part of this mindset shift, there is no doubt COVID-19 has increased awareness about the importance of safely packaged food. In the snack food industry, this trend has manifested in several different ways.

Alternative packaging for grab-and-go snacks

Busier and busier pre-pandemic schedules made grab-and-go snacks – pre-cut vegetables and dip, mixed nuts, fruit cups and more – an ideal option for many consumers. While these snacks are still desirable, consumers are looking closely at products to ensure packaging is sealed tightly and is tamper-evident in case the item has been handled by another customer.

As this concern grows, resealable lidding solutions are an optimal replacement for less secure, rigid packaging solutions. For example, in the case of pre-cut fresh fruit cups, a clamshell package with holes may be perceived as unsafe while a tray and lidding solution that is sealed shut provides a more secure option. Additionally, lid-



Consumer's shopping habits changed in 2020 due to COVID-19 restrictions and regulations.

ding packaging offers an opportunity for increased shelf-life, resulting in decreased food waste.

Improved freshness of bagged snacks

A lasting shelf life has taken on new meaning during the pandemic as many households stock up to avoid frequent trips to the store and food banks are also under increased pressure to ensure that their supply will stay fresh as it's distributed to those in need.

Films help keep food fresher as they can be adjusted to provide the exact permeability needed for each food type. If food needs to breathe, a perforated polyester film will provide the necessary respiration rate without compromising other properties. If the food needs to be protected against oxygen, a high-barrier polyester film will provide low oxygen transmission rates (OTR). If the food is packed with modified atmosphere packaging (MAP), a polyester film will hold the gases inside the packaging. Again, in these cases, flexible packaging can extend shelf life and reduce food waste.



Films help keep food fresher as they can be adjusted to provide the exact permeability needed for each food type.



Lidding packaging offers an opportunity for increased shelf-life, resulting in decreased food waste.

Safety and sustainability go hand in hand

Despite new concerns and changing habits, consumers continue to seek out environmentally friendly products. In order to survive, snack food brands must seek new ways of increasing sustainability throughout the manufacturing process, such as maximizing product shelf life, reducing food waste, and using recycled content to create recyclable packaging. Fortunately, many of the safe flexible packaging solutions described also provide environmental advantages. For example, tray and lidding solutions use less plastic compared to traditional clamshell containers.

Plastics used in flexible packaging can be made from renewable sources, can be recyclable, can use a significant amount of post-consumer recycled material, can be fully biodegradable, and are also lighter than glass or metal for to help reduce emissions in transportation.

Labeling should not be overlooked

As snack food brands review their packaging options for security, sustainability and overall look and feel, the importance of labeling should not be discounted. As consumers accelerate their shopping pace to get in and out of the store quickly and safely, it's more important than ever that they can easily read product labels.

One solution is matte films which provide ease of reading all the different information required on food packaging, including nutritional facts, ingredients, recipes, and more. The non-chemical, anti-glare surface makes it easier for consumers to review the information. As allergens are a major factor in overall food safety, this element of packaging cannot be overlooked.

Additionally, films with a velvety appearance and feel can help products stand out on crowded store shelves especially as the look of matte-finished films is generally associated by consumers with healthier and more sustainable products.

Food safety is not a passing trend

While the COVID-19 vaccine distribution process is underway in many countries around the world, myriad impacts of the pandemic will not be quick to disappear in the "new normal." Among these lasting effects is a continued emphasis on food safety including snack foods, whether they are bagged by the manufacturer or made fresh at the store. Snack food brands should assess their packaging needs to account for consumer preferences in safety, sustainability and labeling as the three factors are tightly interwoven. ■

About the Author:

Marcos Vieira is the global R&D director of Terphane with more than 30 years of experience in the packaging and polyester films industry. Vieira works with brand-owners and packaging converters throughout North America. Visit www.terphane.com for more information.

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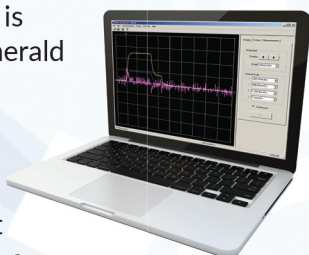
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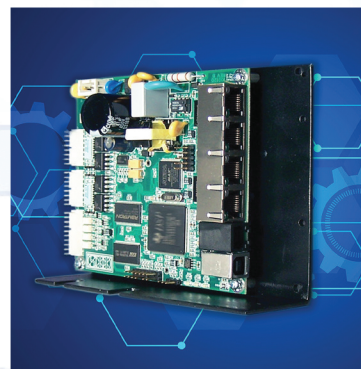
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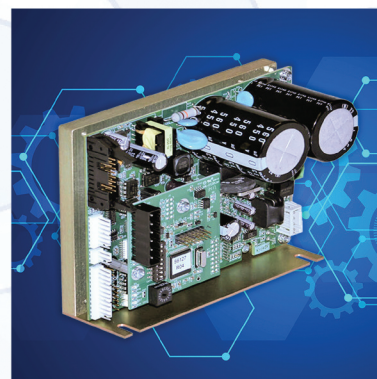
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A MORE CONVENIENT AND SUSTAINABLE MARKET FOR FLEXIBLE PACKAGING

**FLEXIBLE PACKAGING MARKET PROJECTED
TO REACH \$56 BILLION BY 2025**

By Tony Uphoff, President and CEO at Thomas

In today's market, consumers are increasingly paying attention to sustainability, product protection, and convenience — especially with packaging. Manufacturers, on the other hand, are consistently taking note of changing customer demand. Flexible packaging, or any type of package or container made from flexible materials such as plastic or paper, is quickly becoming that new demand.

The flexible packaging industry continues to be one of the fastest growing packaging segments in the U.S. In 2020, the market value of flexible packaging was nearly \$43 billion, more than a 26 percent increase from 2019. By 2025, the flexible packaging market is projected to reach a worldwide value of \$56 billion.

On Thomasnet.com®, our data shows that sourcing for packaging materials has risen 129 percent year-over-year. More specifically, sourcing for flexible packaging has risen nearly 42 percent, while sourcing for paper and paperboard materials rose 51 percent.

Fueling the spike

This sourcing growth is mainly driven by a quickly growing interest in more eco-friendly packaging solutions, increased convenience for consumers, and cost-effective industrial production. Flexible packaging is also notably lightweight; as eCommerce continues to rise, the ability to ship light weight products that take up minimal space will offer major benefits in terms of cost for both consumers and manufacturers.

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The food industry accounted for nearly 70 percent of the flexible packaging market share in 2020.

During COVID-19 pandemic, multi-material packaging reached new heights because of an increased need to protect against germ transmission. And while many consumers have shown a desire for plastic alternatives, the pandemic reinstated a need for product protection that only flexible packaging could offer.

Food and beverage applications

Flexible packaging doesn't just fit better in the pantry; it keeps food fresh for longer periods of time and reduces overall food waste. It's also convenient for those with a busy schedule as the packaging makes it easy to eat on the go, which is a large motivator for customers worldwide.

The North American food packaging market was valued at \$18.6 million in 2020 and is projected to \$31.7 million by 2022. The food industry accounted for nearly 70 percent of the flexible packaging market share in 2020. More specifically, the sector saw a 5 percent increase in demand for flexible stand-up pouches thanks to their convenience and 60 percent reduction in plastic use during production. At the same time, our data showed that industrial sourcing on Thomasnet.com for biodegradable packaging increased by 61.9 percent while searches for pouch packaging grew by 66.9 percent year-over-year.

According to the USDA, 30-40 percent of the food supply in the U.S. is wasted. Smart or intelligent packaging, used to measure the

inner atmosphere of a package or its shipping environment, can enhance product traceability while reducing food waste by altering the supply chain when necessary. Other more affordable packaging technologies, such as flexible packaging, use more effective materials to extend shelf life and reduce food loss.

Pharmaceutical applications

The pharmaceutical industry also contributed substantially to recent growth in the flexible packaging market. Easily disposable and capable of packaging various products of differing size, pouches and bags are often used across the pharmaceutical industry. Last year, the global medical flexible packaging market reached \$15.8 billion; experts predict an additional 6.5 percent growth in this area between 2021 and 2028.

Sourcing on Thomasnet.com for medical packaging increased by an astounding 115.9 percent over the past year. As demand for disposable packaging for medical products such as trays, pre-filled syringes, and thermometers continues to increase, especially in light of COVID-19, flexible packaging is projected to continue on an upward trajectory mainly due to its ability to keep products sterile and maintain user safety.

New Marketing Opportunities

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Flexible packaging in the pharmaceutical industry is projected to continue on an upward trajectory mainly due to its ability to keep products sterile and maintain user safety.

at their doorstep. Unboxing a package is part of the consumer experience, and, if done right, can maintain customer loyalty.

With many businesses going through a digital transformation in light of the rapid rise of eCommerce, the shiftable and formable abilities of flexible packaging allow manufacturers to create unique, innovative packages in multiple shapes and sizes. Flexible packaging also grants businesses the opportunity to alter their packaging frequently at a low cost, include QR codes, and drive customers back to their website. This makes the unboxing experience different each time and drives continued business.

The Future of Flexible Packaging

Consumers often opt for convenience and longevity, and the ease of eCommerce has been made more apparent after more than a year of customers turning to online shopping. According to the Flexible Packaging Association, 60 percent of U.S. consumers are willing to pay more for “functional packaging benefits,” such as product protection and supply chain efficacy, and 46 percent would pay more for food and beverage products stored in flexible packaging.

These trends aren’t just limited to consumers; B2B buyers now expect the same convenience, longevity, and expedient delivery as those in today’s B2C space. For industrial businesses, the ability to ship products safely and cost-effectively is a major motivator behind the switch to flexible packaging. By taking up minimal space and add-

ing little weight, flexible packaging also allows manufacturers to ship more products at once at a lower cost - a win/win for leaders in the industrial space.

As the B2C and B2B markets continue to develop even more quickly than normal in the post-COVID world, flexible packaging will continue to guide the way by delivering adaptable solutions to industrial leaders. ■

About the Author

Tony Uphoff is president and CEO of Thomas, the parent company of Thomasnet.com. His career in business information has given him a ring side seat for every major technology transformation of the last 25 years. Tony regularly speaks on the digital transformation of business and the overarching impact technology is having on business management and leadership. In addition to his role at Thomas, Tony also serves as an advisor and board member of several tech and media companies as well as a mentor at Mucker Labs and a Trustee of Linfield University. You can follow him online at @TonyUphoff.

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HexcelPack Introduces eCommerce Packaging Kit

HexcelPack has introduced Store in the Box™, an innovative eCommerce packaging kit featuring three of Hexcel-Pack's sustainable paper-based packaging solutions, MiniPack™, Hexcel'ope™, and Fil in a Box™.

The kit provides retailers on-demand packaging supplies to quickly ship orders to local consumers from store locations during peak ordering times, allowing stores to bypass their logistics centers.

HexcelPack products included in the Store in the Box kit are:

- **MiniPack:** Conveniently dispensed in a compact, fully-recyclable box, MiniPack utilizes the company's signature product, HexcelWrap™, which converts extensible paper into a three-dimensional, internationally patented cushioning product by making precise cuts at specific angles. This method makes the paper "flex," expanding its volume while maximizing the strength and stiffness of its fibers, creating a superior cushioning product proven to outperform environmentally-harmful product protection alternatives – including plastic-based bubble packaging and pillows;
- **Hexcel'ope™:** The Hexcel'ope is HexcelPack's answer to the bubble envelope, which is every bit as destructive to the environment as bubble itself. The Hexcel'ope mailer is made using the same patented, slit paper technology used in HexcelWrap. All HexcelPack products are "curbside recyclable" which means that they are ready, as is, to go to the recycling plant with no pre-recycling steps necessary; and
- **Fil in a Box:** HexcelPack's innovative design that dispenses HexaFil™ void fill in a recyclable corrugated box. With the same hexagon design and slit paper technology as HexcelWrap, when HexaFil comes off the roll, it spirals just like a helix creating the bulk required for efficient void fill. When used in combination with HexcelWrap, both materials naturally interlock ensuring that items packed will be nestled together in a stable position, less likely to shift during delivery.

For more information, visit www.hexcelpack.com.



ProAmpac Launches QUADFLEX Recyclable Flat Bottom Pouch Technology

ProAmpac recently announced its latest addition to the ProActive Sustainability® platform, QUADFLEX® Recyclable. The format utilizes ProAmpac's R-2000 recyclable laminated mono polyethylene product providing the marketplace a sustainable alternative to multi-material laminates. QUADFLEX Recyclable is available in either a side gusseted with flat or pinched bottom stand up pouch.

QUADFLEX Recyclable reportedly has superior heat resistance for run-at-rate filling speeds and a wide operating window on filling lines. Film structures come in standard or high barrier and can be made with clear windows in the main panels or the side gussets to showcase the product. Matte or gloss surface finishes are offered, enabling brands to connect with consumers in style on the pouch's 5-panel billboard. Reclose is enabled by recyclable press-to-close or hook-to-hook Aplix or Velcro zippers.

QUADFLEX Recyclable is currently available in both terminated side gusset and full side gusset configurations. The premium pouch can be used for pet food and treats, human food, and homecare products. QUADFLEX Recyclable is pre-qualified for in-store drop-off through polyethylene recycle streams.

For more information, visit www.proampac.com.

SIMOTICS S-1FS2 Servomotors

Siemens announced it is introducing the new SIMOTICS S-1FS2 line of servomotors, designed for the clean condition requirements of the food, beverage, sterile packaging, pharmaceutical and other process industries. These new servomotors are offered in a variety of power ratings, from 0.45–2kW (0.60–2.68 hp) with torque from 3.1–14 Nm (2.28–10.32 ft-lbs.).

Crafted with housings of 1.4404 (AISI 316/316L) stainless

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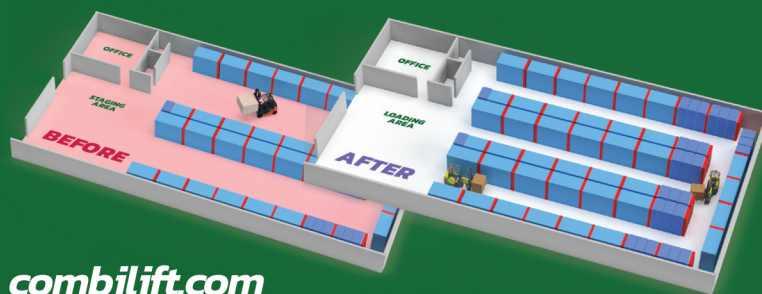
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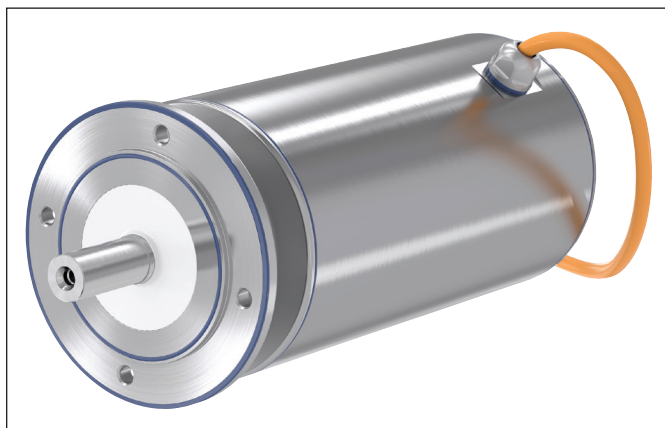
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steel, EPDM seals and bearing grease with NSF H1 approval, these new servomotors are highly resistant to corrosion and acidic chemicals found in the process industries. This extremely high degree of protection is in accordance with IP66/67 standards on the entire motor, with IP69k (30-bar) protection provided on the motor housing.

High dynamics due to low inherent inertia plus high overload capacity for use in pick-and-place applications, plus precise movement of heavy loads, are added features. One cable connection is provided for easy installation and cleaning. The standard absolute encoder is 22-bit multi-turn.

The SIMOTICS S-1FS2 family of motors is suitable for clean-in-place (CIP) processes and for use with all commercially available cleaning agents used with washdown motors.

Quality construction further highlights this new family of motors, providing the machine builder and end-user long service life. These motors are especially designed for the 3-A (U.S.) and EHEDG (Euro) requirements of the food and beverage industries.

Options include a holding brake, stainless steel shaft with or without feather key, cable tail for direct drive connection and a MOTION CONNECT coupling. MOTION CONNECT is the Siemens fully assembled power and signal cable design for use on production machinery of many types.

SIMOTICS S-1FS2 is compatible with the SINAMICS S210 drive system.

Selection/configuration data, dimensional drawings, CAD models, data sheets and full specifications for SIMOTICS S-1FS2 servo motors are available immediately from Siemens.

For more information, visit <https://new.siemens.com>.

StePac Launches Lean and Fully Recyclable Top Seal Solution

Fresh produce packaging innovators StePac Ltd. has expanded its range of top seals with new solutions to boost the retail fresh produce packaging sector. Its newly upgraded portfolio includes lean and fully recyclable easy peel film structures designed to be sealed onto trays or containers housing produce items such as summer fruits, freshly cut fruits and vegetables and more for on-the-go convenience.

The user friendly and appealing films are engineered with



StePac's flagship Modified Atmosphere Packaging (MAP) condensation control technology, rendered with capabilities to significantly extend the shelf life of fresh produce and designed to preserve quality and nutritional value. Its built-in modified atmosphere properties slow respiration inside the packaging, effectively delaying the ageing processes and inhibiting microbial decay.

StePac elegant resealable top seal solutions are also gaining traction. The innovative top-seal is comprised of a laminated structure composed of two layers, with a pressure sensitive adhesive in between. A die-cut in the lower film layer, opens a window that displays the produce packed in the tray and can be cut to the desired dimensions.

The adhesive between the two layers is sufficiently strong so that the upper layer of film can be peeled and resealed to the lower layer up to 20 times making it ideal for multiple servings and can be applied to PET and PP trays as well as eco-sustainable materials. Each time it is resealed, the Modified Atmosphere (MA) activity regenerates and continues to preserve the quality of the food inside the consumers fridge.

The resealable film also features a tamper evidence seal assuring customers that the packaging has not been breached or sabotaged in anyway before purchase.

For more information, visit www.stepac.com.

Introducing the Home-Compostable Coffee Capsule, Co-Developed by Jabil and Prosol

Jabil Packaging Solutions (JPS) announced an advancement in coffee pod sustainability with the launch of its home-compostable coffee capsule for single serve espresso brewers.

This high-barrier coffee capsule improves on existing solutions by eliminating the need for a plastic or foil pouch that is sometimes required to preserve freshness in compostable coffee capsules. JPS co-developed the compostable coffee capsule with Productos Solubles S.A. (Prosol).

The technically complex coffee capsule format is cherished by consumers for its convenience and ease of use, but often challenged for its suboptimal end-of-life scenario. The new coffee pod does not require a secondary pouch to maintain optimal product freshness, keeping packaging to a minimum without sacrificing flavor or shelf life. Prosol's deep bench of



expertise in the entire coffee process, including brewer performance, home compostability and the capsule fill process, was invaluable to creation of the design.

For more information, visit www.jabil.com.



Wexxar Bel Enhances Operator Experience with Design Upgrades to the New IPAK Automatic Tray Former

Wexxar Bel's new line of IPAK Automatic Tray Formers incorporates several design upgrades that allow users greater accessibility for faster, easier, and safer changeovers than ever before. Wexxar Bel, a ProMach brand, is a leader in case and tray forming and sealing solutions, exceling in both standard and customized solutions to maximize throughput in a variety of packing applications.

Updates to the new IPAK tray former also include redesigning the guard doors and other guarding components to provide better access into the machine for faster adjustments and changeovers. Additionally, the number of adjustments needed for changeovers has also been reduced, making it easier for employees with varying skill levels to operate while reducing the amount of training needed and, ultimately, take greater ownership of the machine on a daily basis.

Simplifying the machine also aids maintenance crews by troubleshooting and servicing the machine more efficiently, minimizing downtime.

The filter regulator and coalescing (FRC) on the redesigned IPAK tray former has also been relocated outside the machine, enhancing ease of accessibility when pneumatic adjustments are required. The relocation has also made pneumatic connections more direct and efficient, reducing the chance of air leakage and making for a more energy-efficient operation with an overall lower cost of ownership.

For more information, visit www.wexxar.com.



High-Speed Curve Control for Food Tray Stability with Insert-Roller Side Flex Belting Assist

Multi-Conveyor recently announced it built a massive system for a globally-recognized food manufacturer. The system included two tandem conveyor sections that required tray stability through high-powered 90-degree degree turns.

Filled food trays are transported to the infeed end of each conveyor. Each line also discharges into a palletizer infeed which requires positive forward product movement with occasional accumulation.

Side-flexing radius flush grid modular plastic belt with insert rollers by Intralox was the perfect fit for this application. LPB transitions can be used on the infeed.

Modular plastic belting is commonly used for radius curves requiring low back pressure accumulation. Adjustable product guide rails provided additional assistance throughout the entire system.

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

Cullen Boosts Converting Power with New Folder-Gluer Duo from BOBST

Cullen Eco-Friendly Packaging reported it has extended its product portfolio and increased capacity and production reliability after investing in two BOBST EXPERTFOLD 165 folder-glue.



The double EXPERTFOLD investment builds on a long-established partnership with BOBST as Cullen already operates two BOBST die-cutters.

EXPERTFOLD 165 is reportedly one of BOBST's most popular folder-gluers. Designed as a modular machine, it can handle a range of corrugated or litho-laminated boxes and can be equipped with a variety of peripherals and devices to offer packaging converters super versatility and enhanced performance. It delivers advanced feeding, accurate pre-breaking and a smooth, accurate folding process that minimizes fishtailing and gap variation, ensuring high

throughput and exceptional finished product quality.

Following a series of new efficiency-boosting features in 2020, the EXPERTFOLD 165 reportedly offers up to 15 percent setup time reduction, and improved flexibility and accuracy with corrugated packaging. Additional command panels have been incorporated at each stage of operation, enabling greater control along the full line and reducing changeover times.

The ACCUFEED was upgraded to include a new pneumatic locking feature for feeding ramps and the integrated blank aligner was innovated to have wider conveyors for perfect quality folding on heavy flutes. Meanwhile, on the folding section, customers can now opt for larger folding belts, a heavy-duty central conveyor and a dedicated pressing device, specially developed for double wall board.

For more information, visit <https://www.bobst.com>.



Markem-Imaje Launches New Remote User Interface for the SmartDate X30 Thermal Transfer Overprinter

Markem-Imaje has released a new remote user interface (RUI) for the SmartDate X30 thermal transfer overprinter (TTO).

The optional RUI is ideal for production lines which require a broader suite of functions including password protection, front-end uniformity with its full range of Markem-Imaje solutions and, web user interface (web UI) or virtual network computing (VNC) integration with OEM packaging machines.

Offering an advanced range of functions, the new SmartDate X30 RUI reportedly reduces downtime, waste and product recalls by minimizing human error. This is achieved through multiple functions including a simple print preview and print adjust functionality, enabling dead dot detection which is viewable and adjustable with a single click. The simple online password configuration facilitates the creation of multiple, customizable profiles allowing the operator to immediately access their required functions and begin operating in just a few clicks.

The new RUI offers operators the ability to monitor up to five production metrics, which can be selected from a total of 9 options, directly on the home screen. With an external device plug-in capability there is an option to use a keyboard, barcode scanner and USB memory stick.

The new RUI for the SmartDate X30 is provided with a bracket and can be easily mounted anywhere on the machine. Plus, the simple installation also includes web UI or vertical network computing integration with OEM packaging machines.

For more information, visit <https://markem-imaje.com>.

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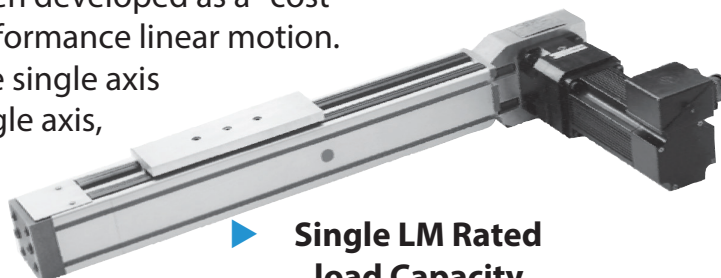


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AD INDEX

| | |
|--|----|
| Ace Controls Inc. | 7 |
| www.acecontrols.com | |
| Cadence..... | FC |
| www.specialtyblades.com | |
| Combilift USA | 27 |
| www.combilift.com | |
| Crandall Filling Machinery..... | 15 |
| www.crandall.com | |
| Delta ModTech..... | BC |
| www.deltamodtech.com | |
| EBS Ink Jet Systems USA | 2 |
| www.ebs-inkjet-usa.com | |
| HMC Products Inc. | 27 |
| www.hmcproducts.com | |
| Industrial Indexing Systems..... | 19 |
| www.iis-servo.com | |
| Logical Machines..... | 31 |
| www.logicalmachines.com | |
| Lotar Enterprises..... | 14 |
| www.lotarenterprises.com | |
| Northcore Industries | 30 |
| www.northcoreind.com | |
| Omtec Corp. | 25 |
| www.omtec.com | |
| Paxton Products..... | 21 |
| www.paxtonproducts.com | |
| Raco International Inc. | 31 |
| www.racointernational.com | |
| Schober USA Inc. | 25 |
| www.schoberusa.com | |
| Totani America, Inc. | 3 |
| www.totaniamerica.com | |
| Triangle Package Machinery | 5 |
| www.trianglepackage.com | |
| William B Rudow Co. | 23 |
| www.suckers.com | |

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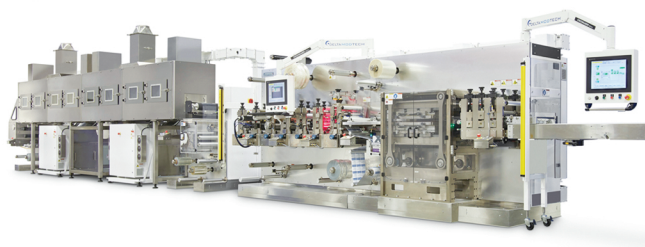


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