

SEPTEMBER 2021 | SPECIAL EDITION



The Processing Zone SHOWCASE

SEPTEMBER 27-29
LAS VEGAS, NEVADA

2021

A PRE-SHOW PLANNER

- Exhibitor Guide, Floor Plan, and Events
- Special Sessions Featuring MWC, Kraft Heinz, Conagra Brands, B&G Foods and More
- Quick Facts to Maximize Your Show Experience
- PACK Ready Protocols to Welcome You Back Safely

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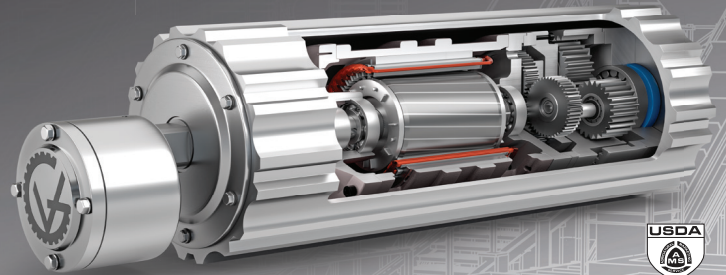
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The Processing Zone Is Back at PACK EXPO Las Vegas



JIM PITTAS
President and CEO
PMMI

On behalf of PMMI, The Association for Packaging and Processing Technologies, I'm excited for the return of PACK EXPO Las Vegas and Healthcare Packaging EXPO—this year's most comprehensive packaging and processing event in the world—where you will see the latest packaging and processing technologies from more than 1,500 exhibitors representing virtually every vertical industry.

Back by popular demand, **The Processing Zone** returns to PACK EXPO Las Vegas and Healthcare Packaging EXPO 2021. You will have the opportunity to discover solutions to help increase efficiency, achieve total system integration, and ensure safety. No matter what vertical industry you serve, you'll be sure to find the processing solutions you need to move your business forward. Visit The Processing Zone in the North Hall at PACK EXPO Las Vegas 2021.

Be sure to stop by the **Processing Innovation Stage**, which will focus on the latest breakthroughs in processing specifically. Stop by whenever you can to take a break and learn something new. It is also conveniently located in the North Hall at PACK EXPO Las Vegas.

Another new feature to the show this year is the **PACK to the Future** exhibit. Take a journey through the evolution of packaging and processing. You can explore how packaging developed as civilizations and trade evolved, how the industrial and scientific revolutions led to rapid innovations and mass production, and how the digital revolution is shaping the future of packaging. This interactive exhibit is located in the North Hall (N-11030).

Additionally, as with any PACK EXPO event, education is paramount. Attend free 30-minute exhibitor-hosted seminars on breakthroughs and best practices at **The Innovation Stages** with three stages located in the Central Hall. Or stop by **The Forum** for free, 45-minute learning sessions on the latest industry trends, including hands-on activities, small group discussions, and Q&As with leading organizations, also located in the Central Hall.

While you are walking the floor, be sure to vote for the **Technology Excellence Awards**. These awards recognize exhibitors' innovative technology, and the winners will be announced at the show on Tuesday, Sept. 28. Additional packaging award winners from the past year-plus will be on display at **The Showcase of Packaging Innovations®**, sponsored by WestRock, and located within The Containers and Materials Pavilion.

Don't miss the **Packaging and Processing Women's Leadership Breakfast** on Tuesday, Sept. 28, and hear more about the "New World of Work."

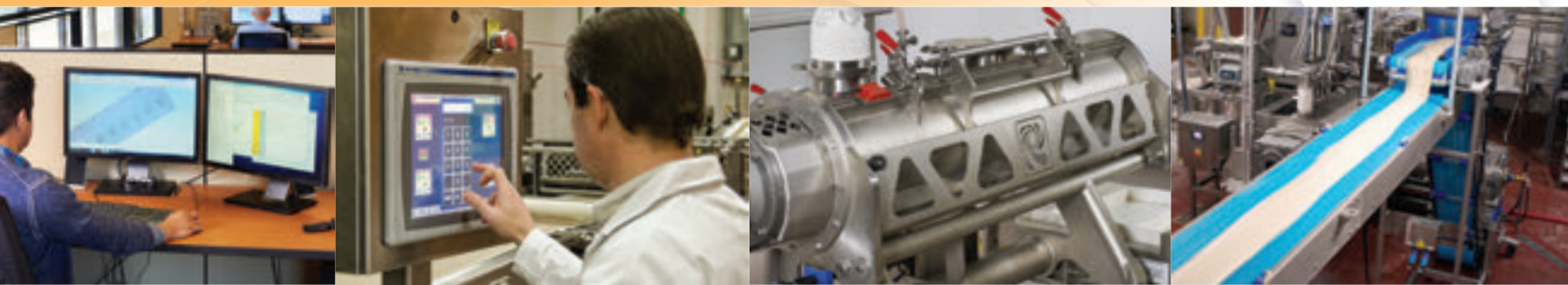
To maximize your time, be sure to use this guide, the mobile app (available in the App Store or Google Play), or visit one of our Attendee Resource Centers. If you aren't sure what you are looking for, visit the Ask the Experts desk in the Central Lobby to point you in the right direction.

Thank you for being part of PACK EXPO Las Vegas and Healthcare Packaging EXPO 2021. Enjoy the show!

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ABOUT PMMI

PMMI, The Association for Packaging and Processing Technologies, represents more than 900 North American manufacturers and suppliers of equipment, components and materials as well as providers of related equipment and services to the packaging and processing industry. We work to advance a variety of industries by connecting consumer goods companies with manufacturing solutions through the world-class PACK EXPO portfolio of trade shows, leading trade media and a wide range of resources to empower our members. The PACK EXPO trade shows unite the world of packaging and processing to advance the industries they serve: PACK EXPO International, PACK EXPO Las Vegas, Healthcare Packaging EXPO, PACK EXPO East, Enlace EXPO PACK, EXPO PACK México and EXPO PACK Guadalajara. PMMI Media Group connects manufacturers to the latest solutions, trends and innovations in packaging and processing year-round through brands including *Packaging World*, *Automation World*, *Healthcare Packaging*, *Contract Packaging*, *ProFood World*, *Mundo PMMI* and *OEM*. PMMI Business Drivers assist members in pursuing operational excellence through workforce development initiatives, deliver actionable business intelligence on economic, market and industry trends to support members' growth strategies and actively connect the supply chain throughout the year.

Learn more at pmmi.org and packexpo.com and pmmimediagroup.com.

1 About PMMI

PMMI, the Association for Packaging and Processing Technologies, and producer of PACK EXPO Las Vegas, welcomes you to the most comprehensive packaging and processing exhibition in North America this year.

4 Vertical Perspectives

Packaging and food industry journalists share their points of view on how various market segments are faring in these turbulent times.

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VERTICAL PERSPECTIVES

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Since the packaging industry serves so many disparate markets, we tend to think of ourselves as a horizontal industry. We cover a whole lot of CPG, food, beverage, and pharmaceutical real estate, but we tend to focus on a comparatively narrow band of operations in the supply chain that centers around the packaging step. That's why it's always interesting to piece together our now-annual Vertical Perspectives section, which appears in every PACK EXPO Showcase issue. My colleague Joyce Fassl, editor of *Packaging World's* sister publication *ProFood World*, joins our six editorial counterparts at Sosland, a publisher of food industry publications, in diving into their respective markets from points of view that packaging-focused CPGs might not consider.

While each vertical market has its own unique set of challenges and opportunities, there are a few common takeaways. The biggest shared theme is that while demand prospects for food and beverage are strong and getting stronger, and producers are seeking new equipment to support this growth, the biggest obstacles remain on the input side of the equation. Consumers are returning to foodservice destinations, eating snacks and comfort food, and feeding their pets (at remarkable rates, in fact). But workforce shortages, ongoing supply chain disruption for both equipment and ingredients, and that dirty word *inflation* are common hurdles across these industries.

The workforce and supply chain wrinkles are interconnected since even if a processing facility might be able to effectively replace human labor with automation, where is that automation coming from? How quickly will it get there? Will you be able to get change parts? Some of these questions can be asked of material inputs and ingredients, too.

Assuming you can procure and install that automation, are you ready for all that data? How quickly will you be able to leverage it for continuous improvement? And, of course, data usage only invites the specter of cyber breaches, which many food producers have experienced of late, as Joel Crews mentions in his piece.

Also, for obvious shelf-life and cold-chain related reasons, the food and beverage industry has lagged behind other CPGs in e-commerce, but could pet food be a breakthrough market in the space? Can other processors learn e-comm tips from this outlier that got such a boost during the pandemic?

Meanwhile, reports of sustainability's demise—at the hands of the pandemic and at the altar of hygiene—have been greatly exaggerated. In fact, today's consumer may be even more attuned to global health matters, as Charlotte Atchley suggests on page 6, and the big brand owners are taking notice with aggressive sustainability goals for their entire operations.

All these issues are interconnected; none of them exist in a vacuum. How to navigate between them is the real question. I'll leave it to the following seven experts to better explain, and hope you enjoy these columns as much as I have.

—Matt Reynolds, Chief Editor, *Packaging World*

Unprecedented Challenges Call for Prescient Thinking

What I started to think about writing about a column to encompass all of the food and beverage industry's most pressing challenges and put them in context with the upcoming PACK EXPO Las Vegas show, I envisioned more than 15 different converging dilemmas.

My thoughts included the following questions:

- What's in the offing for automation, controls and software?
- When will inflation slow down?
- How long will supply chain disruptions continue?
- How will e-commerce and omni-channel shopping affect future manufacturing and supply chain demands?
- How will ongoing labor market woes be resolved?
- And finally, what types of unprecedented manufacturing planning tools will be needed in a post-pandemic environment?

While virtual factory acceptance testing became the norm for many capital expenditure projects during the pandemic, some projects still require in-person equipment inspections. With overseas travel still prohibited in many parts of the world, the time it takes to get a project from inception to completion is longer than ever. Plus, cyberattacks remain a constant threat to CPGs and OEMs alike.

The solutions to these challenges can only begin when we determine how to use change management techniques to solve problems and how to upscale existing staff skills to meet higher-level job requirements. Building excellent, sustainable company cultures are essential to gain employee trust and loyalty, as well as tap into unused ingenuity. Employees need to feel they are respected, valued, and that their work is making a difference.

While the pandemic has caused a lot of challenges and shifting priorities for the food and beverage industry, one front burner matter is constant, and that's food safety.

As the U.S. Food and Drug Administration (FDA) ushers in its New Era of Food Safety, some of its main intents are to increase digitalization of traceability and modernize and create food safety cultures within each processing plant.

Food safety leaders are committed to producing the highest quality and safe foods, while training and empowering their staffs to do the same. This is certainly not a new approach. The difference is now processors will be rated on how well they create a food safety cul-

ture. But here lies the rub. A qualified and experienced workforce remains elusive.

One bit of good news is that the Global Food Safety Initiative (GFSI) has become The Consumer Goods Forum's (CGF) Coalition of Action on Food Safety. The coalition's goal is to operate with more agility and increased transparency. It will be led by CGF board members Dirk Van de Put, chairman and CEO of Mondelēz International, and Danny Wegman, chairman of Wegmans Food Markets.

The coalition's aim is to address food safety systems in supply chains, help raise the bar on food safety globally, strengthen and harmonize food safety systems to feed a growing global population, and develop markets that can deliver food safely worldwide.

In my recent conversations about new plant technology with industry suppliers and food manufacturing leaders, phrases like "the best partnerships ever" and "we couldn't have done it without our partners" keep popping up. The importance of partnership and teamwork has accelerated over the past decade and also shown its necessity to overcome the food industry's challenges. During the pandemic, processors leaned on their partners more than ever and overcame challenges together. What was learned and implemented during tough times will only strengthen the industry's response to the next challenge.

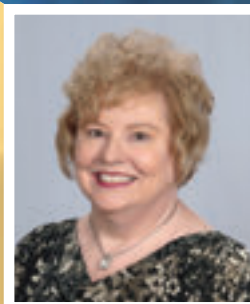
Today, savvy processors are creating contingency plans for the next great business debacle. Supply chain disruptions will surely go on as the pandemic lingers. Inflation is no longer knocking at the front door but is now sitting in our midst.

Automation, software, and robotics are proven entities that continue to take the food industry to the next level of technology, but along with that comes tons of data. The questions become: how do we deal with all the data, determine which data is truly meaningful, and then decide how and when efficiency actions should be implemented.

There are resources to help food and beverage processors meet the pressing challenges of this demanding era. I don't have all the answers, but a good place to start is at PACK EXPO Las Vegas this September.

The last 18 months cannot be compared to any challenges the food and beverage industry has faced in the past, but it must use the right resources, latest technologies, and the brightest minds to overcome them.

VERTICAL PERSPECTIVES



JOYCE FASSL
Editor in Chief
ProFood World

Innovation at the Eye of the Storm

The shifts seen in 2020 due to the COVID-19 pandemic continue to ripple across the whole-sale baking and snack industries. Many of the early challenges—protecting employees and foodservice slumps—have evened out as vaccines have become available, making it safer to work side-by-side and dine out again. But ripples remain.

The bright side has been that consumer purchasing of bakery products and snacks have remained enthusiastic. Bakers continue to stay optimistic about their ability to hold onto buyers who rediscovered packaged baked goods during the pandemic. According to IRI data for the 52 weeks ending March 28, 2021, commercial aisle bakery dollar sales reached \$65 billion, an 8% increase in dollar sales compared to the previous year. And current numbers from IRI show that consumers still have an appetite for snacks, even when compared against the largest gains of 2020. The total salty snack category saw an 8.2% increase in dollar sales in the 52 weeks ending May 16, 2021 compared to a year ago. Put that increase against the 1.9% rise in unit sales and 2.6% hike in volume sales, and that reveals a robust industry poised to take advantage of consumer interest.

This strong demand has bakers and snack manufacturers expanding production at a rapid pace. White Castle, Pretzels Inc., Grupo Bimbo, PepsiCo, General Mills, and Gruma have all announced plans to invest in existing production facilities or new ones in North America and around the world.

None of this is surprising considering the *Baking & Snack*/BEMA U.S. Commercial Baking Industry Capital Spending Survey published in the February 2021 issue of *Baking & Snack*. In that report, 52% of baker respondents indicated they would be increasing their capital investments in 2021 compared to 2020. Much of these investments were to maintain existing production lines and equipment, upgrade those lines, or add new equipment. And this data mirrored the boom in demand for bakery and snack products as 68% of baker respondents cited that their main goal was to increase capacity for existing products.

Despite this sunny outlook, the pandemic ripples still loom. One of the biggest waves to crest from the pandemic that still threatens the industry is the supply chain challenges everyone in manufacturing faces. Input costs for products have remained elevated as

is the case with raw materials for the equipment bakers and snack manufacturers are so keen on purchasing right now. This has caused delays in investments these companies are anxious to make.

The current of workforce challenges shifted in 2020 to a focus on keeping employees safe from the coronavirus. In 2021, however, the previous challenges of finding and retaining workers have only become more urgent. The pandemic created an ultra-competitive market with potential employees having their pick of jobs, benefits, and wages.

In this storm of increased demand, production expansion and supply chain challenges, innovation is brewing. Baking and snack companies are creating new products to retain those new buyers and dollars accrued during the pandemic. They are also looking to serve the new needs of e-commerce as well as foodservice customers that had to adapt to survive during the pandemic. That means not only new products but also new packaging to preserve quality in an environment where restaurant-quality food must be delivered in a timely manner and at dine-in quality standards.

Baking and snack companies are looking for automation to reduce their reliance on an unskilled workforce. This is especially true in the packaging department, the only area in a bakery where things get crowded. Bakers are redefining how they calculate return on investment, taking into account labor savings, and investing in projects that in the past might have been too costly to justify. Acceptance of robotics as a viable option accelerated during the pandemic and only continues in its aftermath.

And sustainability, which was on the backburner last year, has begun taking its place again, maybe even more prominently than before 2020. Much of the investments made by Flowers Foods, Bimbo Bakeries USA, PepsiCo, and Mondelēz International in the past year improved these companies' carbon footprint and energy savings. Consumers indicate a more nuanced view of the need for plastics and packaging for food safety and quality but insist on more recyclable materials. This issue is quickly moving from a bonus feature to a must-have response for food companies when it comes to ingredient sourcing, production, and packaging. As the need for more sustainable packaging grows, so will the opportunity for innovative solutions for packaging that is not only effective at protecting the product but also the bottom line.



CHARLOTTE ATCHLEY
Editor
Baking & Snack

Dairy Industry Quick to Pivot With Ever-changing Consumer Trends

With rising demand from the retail sector and disruptions in foodservice, dairy processors were far from immune to the effects of the COVID-19 pandemic. The dairy industry as a whole had to rethink its strategy to meet consumers where they are. Amid the chaos, many companies found success in innovative new products.

The U.S. dairy industry continues to play a vital role in the United States, supporting 3.3 million total jobs and \$41.6 billion in direct wages, according to the latest economic impact report from the International Dairy Foods Association (IDFA), which represents the nation's dairy manufacturing and marketing industry.

IDFA's 2021 Economic Impact Study, which measures the combined impact of the dairy products industry, showed the U.S. dairy industry's economic impact totaled \$752.93 billion.

Snacking emerged as one of the biggest trends over the past year. To meet those ever-expanding cravings, dairy processors developed a range of snack products packaged in a way that also aligns with the demands and interests of today's consumers.

Consumers have a lot of expectations when it comes to snacking. Taste, variety, convenience, nutrition, portability, and sustainability are often concurrent factors driving innovations in snacks and snack packaging.

The ongoing global health crisis has also impacted snack choice. As consumers shifted to remote work and learning, the propensity to snack has never been stronger. According to a new report from The Hartman Group, 48% of all food and beverage occasions are now snacking occasions. Mordor Intelligence projects that the global dairy snack market will grow at a combined annual growth rate (CAGR) of 3.49% through 2025.

A variety of dairy and alternative dairy products fit the bill for this kind of all-day eating across demographics. The milk, cheese, yogurt, and ice cream categories encompass an array of snacks that can be purchased for single-serve and smaller portions as well as larger and family-sized portions.

Within dairy snacks, some segments have fared particularly well. Snacks with health claims have garnered attention. In its recent research on the dairy snack market, Mordor Intelligence reported that demand for healthy and convenient snack options largely fueled sales of dairy snack products.

Consumers' changing snacking habits also are affecting packaging. Convenience, a significant driver of packaging innovation for the past couple of decades, contin-

ues to be a hallmark of package design for dairy snacks. Those who provide dairy processors with packaging materials and equipment have likewise updated and expanded their solutions to reflect today's marketplace drivers.

The stay-at-home orders spurred a cooking renaissance and an interest in food as entertainment, giving dairy snacks a chance to shine. The popularity of charcuterie boards has led to new packaged charcuterie products, cubed cheese, and even customized multi-compartment trays.

A strong demand for snacks like cheese crisps and cheese curds helped processors make diversified products while keeping up with the need for safety. Opening features for packages include peelable and resealable film and "zig-zag" knife cutting for flexible film that allow for easy consumer access.

Dairy processors are also working toward greater sustainability with various packaging changes for snack foods and beverages. Many dairy processors are investing in sustainable packaging materials and methods to meet burgeoning consumer demand as part of their own corporate responsibility practices. Suppliers are adding more sustainable offerings to their portfolios of packaging materials, including packaging made with layers of plant-based polymers and renewable material.

Finally, customization and connectivity are propelling packaging solutions for dairy snacks.

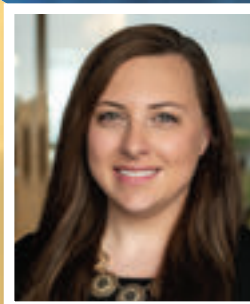
An already tight labor situation was exacerbated by labor shortages tied to the COVID-19 pandemic. Solutions that keep things flowing in a plant, especially given recent circumstances, are crucial. As the industry becomes more consolidated with larger players, greater automation makes sense from many perspectives.

Amid these challenges and changes, better technologies help curb problems that slow or stop production. The advent of Industry 4.0, with the use of digitally networked machines, artificial intelligence, augmented reality, blockchain, the Internet of Things, and robotics that represent the fourth industrial revolution, offers an opportunity to create more efficient, time-saving operations in dairy plants.

Those technologies include improvements to existing machinery and updating previous systems with new automated equipment, all adding up to improved efficiencies that translate to a better bottom line.

As the world continues to move back toward some semblance of normal, uncertainty will still remain a challenge as the industry navigates the remainder of 2021. However, dairy processors have proven time and again resiliency in even the most uncertain of times.

VERTICAL PERSPECTIVES



KRISTEN PUTCH
Managing Editor
Dairy Processing

Food Manufacturers Seek Clarity on Rising Costs, Shifting Trends

As the North American food and beverage market makes the transition from pandemic-related lockdowns to a return to normalcy, one key question hangs over the industry—What's next?

An initial dynamic food and beverage management teams are navigating is rising input costs. Many parts of the world, particularly more developed regions, are emerging from the pandemic as vaccine availability becomes ubiquitous. Increased consumer mobility means the industry is seeing a rapid shift in where people buy and consume food, and that is straining global supply chains to meet the elevated levels of demand.

The shift has not been as abrupt as when the pandemic began and much of the foodservice industry around the world had to shutter, but it has been disruptive. As the developed world edges closer to herd immunity, it is expected people initially will flock to restaurants and reengage with their local communities.

This is translating to significant food price inflation. The U.S. Department of Agriculture in late April forecast prices for all food in 2021 to rise 2% to 3% from 2020, when prices were up 3.4% from 2019. Prices in March 2021 were up 3.5% from March 2020.

High input prices are not a new situation for food and beverage manufacturers. There is a “playbook” focused on pricing and savings, which management teams may follow to offset the rising costs. Newer levers that may be pulled include more effective price/pack architecture and an emphasis on innovation in the premium space.

“We continue to see signs of North America emerging stronger from the crises,” said Graeme David Pitkethly, chief financial officer at Unilever, in late April. “Demand for in-home foods remains high, and our out-of-home business is recovering faster than we expected.”

In May, David L. Wenner, interim president and chief executive officer of B&G Foods, said he sees the inflationary situation lasting into 2022.

“My personal opinion on the agricultural commodity side is that this is more than a one-year phenomenon, that this crop is not going to fix the problem even if it's a good crop, and that we will see elevated costs going into 2022,” he said.

“If you look at the history of things like soy and corn oil, and things like that,” Wenner added, “this kind of thing happens every eight, 10 years. And it takes a year or two of good crops to shake it out back to normalized levels. There is a long-term normalized level of pricing in the market for these kinds of commodities. Shortages drive those up, and it may drive it up for more than one year.”

Adding to the pressure of rising prices is food and beverage manufacturers also must discern what consumer behaviors embraced during the pandemic will remain. Increased use of e-commerce, for example, is expected to stick, according to Tim Steiner, co-founder and chief executive officer of Ocado Group, but with caveats.

“This is the new normal and not the old normal,” Mr. Steiner said during a June presentation during the virtual Consumer Goods Forum. “Everywhere during the pandemic, we saw acceleration. We will see it continue, maybe [there will be] a bit of pullback, but then more acceleration.”

Pricing, availability, range, freshness, and execution are all attributes retailers competing in e-commerce will need to focus on to get beyond the potential pullback Mr. Steiner referenced and reap the reward of the acceleration he expects to follow.

The outlook for restaurants and institutions remains cloudy. Recovery is underway as more people are vaccinated and comfortable dining out, but changing mobility trends may shift where restaurants are located in the future and how they serve customers.

The work-from-home trend is expected to accelerate even as some offices reopen. Hiring managers participating in a survey by the company Upwork, a connectivity platform, said they expect the number of people working remotely to nearly double by 2025 from where it was pre-pandemic. In other words, an estimated 36 million U.S. workers are expected to be working from home in four years.

More people working from home offers consumer packaged goods manufacturers a long-term opportunity, and many are adding capacity to meet the perceived increased demand. Conagra Brands, General Mills, J.M. Smucker, Kraft Heinz, Nestlé, and many other companies are investing in capital projects to expand production capacity.

The past 18 months may be described as a great experiment born out of necessity. It has reinvigorated the frozen food and center aisles of supermarkets, pushed many consumers to become more comfortable in their kitchens, and accelerated consumer adoption of e-commerce and other digital platforms.

These accelerated trends emanated from stay-at-home orders put in place to bend the infection curve of the virus. As the pandemic fades, it is expected that each trend will decelerate as consumers revert to a pre-pandemic normalcy. But no one knows what that new normal will look like or how it will affect the sales channels food and beverage manufacturers serve daily.



KEITH NUNES
Editor
Food Business News

Battle Tested and More

As meat and poultry processing companies continue down the path toward recovery after historic setbacks and operational challenges caused by COVID-19, many of them are now facing new hurdles related to labor, transportation, feed costs, labor shortages, and threats to cybersecurity that again spotlight the fragility of the industry's supply chain, from farm to fork.

In early June, JBS USA reported a hacker breached the company's servers in North America and Australia, forcing its leaders to make the difficult decision to pay an \$11 million ransom to minimize the impact of the cyber attack. This was one in a series of events in 2021 that is testing the mettle of an industry that was down, but never out, throughout the enduring pandemic.

In most quarterly earnings reports from some of the industry's highest-profile companies, many executives have issued warnings of looming price increases as input costs have tempered sharp increases in sales, especially in the resurging foodservice channel. A shortage of front-line plant workers, which fueled operational headaches long before the pandemic, were exacerbated by well-publicized outbreaks of the virus at many plants, forcing companies to offer higher wages, hiring and referral bonuses, and richer benefits packages. Even so, most plants have not seen production at pre-pandemic levels and are scrambling for workers.

Meanwhile other rising operational costs are not relenting in 2021 and will likely continue well into 2022. Expectations for sustained high feed costs have many chief financial officers executing hedging strategies to temper the impact on the second half of the year. Companies like Hormel Foods, facing corn feed prices that increased by 40% early in 2021, not only raised prices for its Jennie-O Tukey Store products, but also caused the company to reformulate its feeding formulas to use more soybean meal and less corn. Earlier this year, Sanderson Farms said its average feed costs per lb of poultry products processed increased nearly 27% so far in 2021. Offsetting higher market process for chicken boneless breast meat, chicken breast tenders, and especially jumbo wings (priced 89% higher than last year), prices for Sanderson's chicken products increased by nearly 33% (22¢ per lb) in the first quarter of the year. Poultry processors are holding out hope that the chicken sandwich war among QSR chains and, more broadly, the continued reopening of foodservice operations, will continue to bolster demand in 2021 or at least until inflation-induced costs flatten.

The U.S. pork industry is hoping for continued

large volume and value of exports in the year ahead, especially to China. Pork production for 2021 is expected to be flat with 2020, and broiler production is expected to be up 0.5%.

Dan Halstrom, president and chief executive officer of the U.S. Meat Export Federation, expressed cautious optimism about the prospects for exporters as of the first quarter.

"Transportation challenges are currently a dominant concern, particularly the congestion and container shortages at our West Coast ports where shorthanded crews are handling record-large cargo volumes," Halstrom said. "Labor is also at a premium in processing plants, which affects the industry's ability to fully capitalize on demand for certain labor-intensive cuts and variety meat items."

In early May, Donnie Smith, then chief operating officer and group president of poultry with Tyson Foods, echoed the concerns of other meat and poultry companies coming out of a global pandemic, facing the fallout and new challenges. He said the company's pork plants are short staffed, and in addition to juggling schedules and adjusting wages higher, the company is like others in its investment in automation and technology "to try to alleviate these more difficult and high-turnover jobs."

"It's been taking us about six days to do five days' worth of work because of turnover and absenteeism," he said.

For Tyson and other beef processing companies, however, demand and margins helped this industry segment survive and thrive despite the pandemic and the market challenges of 2021.

However, according to *Cattle Buyers Weekly* Publisher Steve Kay, in his mid-year report for *MEAT+POULTRY*, published in June, beef producers' woes have continued while processing fed beef has been quite profitable.

"Cattle producers at all levels struggled from pandemic-depressed prices," Kay wrote. "Live cattle prices mounted a modest rally this past April but then began to fall back even as wholesale boxed beef prices soared."

USDA's weekly comprehensive cutout (cuts, grinds, and trim) advanced more than \$53 per cwt in the six weeks leading up to the end of April.

"This was the biggest rally in such a period in industry history," according to Kay. The result was operating profit for fed beef processors that soared from early in the year to unprecedented levels, according to Kay, averaging a positive \$310 per head in the first quarter and exceeding \$600 per head the last week of April.

VERTICAL PERSPECTIVES



JOEL CREWS
Editor
Meat+Poultry

Grain-based Companies Strive to Hold 2020 Gains

Even while facing uncertainty about the outlook for business given a resurgence of the COVID-19 pandemic, grain-based food companies in 2021 have sought to maintain and build on gains achieved since March 2020 in retail sales, while also capitalizing on the gradual recovery of markets like foodservice hit hard by the pandemic.

For example, Hostess Brands, Kansas City, enjoyed strong results in the first quarter of 2021 and affirmed its outlook for 3% to 4.5% sales growth and strong earnings growth. The company appeared to be enjoying the best of both worlds, with strong supermarket sales and growing business from outlets, such as convenience stores that had suffered through much of last year, said Andrew P. Callahan, president and CEO, in late February.

"We continue to experience elevated at-home consumption, while at the same time, increased on-the-go snacking and consumer mobility are benefiting our profitable single-serve mix," he said.

Bread bakers also achieved success. Grupo Bimbo achieved record results in its first quarter this year, paced by strong U.S. demand for branded bread, buns, breakfast products such as baked and English muffins, sweet goods, and snacks. The parent company, a major global baker, hit all-time first-quarter highs for sales, profits, and margins.

Branded business also has been a driver at Flowers Foods. In the company's first quarter, strong growth was achieved by Canyon Bakehouse and Dave's Killer Bread, while heritage brands Nature's Own declined modestly. Overall, sales of packaged bread at supermarkets remained elevated above pre-pandemic levels in the first months of 2021.

Like other center-of-store categories, ready-to-eat cereal sales have grown during the COVID-19 pandemic, though not as quickly as breakfast-at-home alternatives, such as eggs and pancakes. Following a strong start to the company's 2021 first quarter, Kellogg raised its guidance for the year. Still, it was the company's snack business that propelled company growth in early 2021, while cereal sales slipped after sensational gains in the first quarter last year.

While the past year has not been an active one in mergers and acquisitions, particularly among ma-

jor grain-based foods companies, it has not been completely devoid of activity. Most notable was the sale earlier this year of the North American business of Aryzta to private equity firm Lindsay Goldberg for \$850 million. Swiss-based Aryzta had been struggling for some time, leading to the sale of the North American business, which has been renamed Aspire Bakeries and which operates several baking businesses, including brands such as Otis Spunkmeyer and La Brea.

After going through an ownership change in late 2019, The Bakery Cos. rebranded as Crown Bakeries earlier this year and has been active in the mergers and acquisitions front.

In 2021, Crown Bakeries acquired Lawrence, Mass.-based Bagel Boy, a baker of premium, New York-style bagels, and Michel's Bakery, a Philadelphia-based baker specializing in large-scale, private label baking for distributors and quick-service customers. A year earlier, The Bakery Cos. acquired a baking plant in Smyrna, Ga., from Specialty Bakers. The plant produces and distributes laminated dough items, including croissants and Danishes, as well as sweet baked goods for in-store bakeries. Also in 2020, the company bought Steck Wholesale Foods of North Sioux City, S.D., a baker of English muffins and biscuits.

In international transactions, Mondelēz International in May agreed to acquire Chipita, a global baker of packaged cakes and pastries, based in Athens.

In the donut business, two leading chains have "swapped places," with a privately held business completing an initial public offering and a publicly traded company going private. Owned by JAB Holding since 2016, Krispy Kreme Doughnuts went public July 1. The offering was priced at \$17 per share, well below the \$21 to \$24 range that had been anticipated. Still, the offering valued Krispy Kreme at \$2.8 billion, well above the \$1.35 billion price paid by JAB five years earlier. The IPO followed by about half a year the December 2020 acquisition of Dunkin' Brands Group by Inspire Brands for \$11.3 billion. Inspire owns several restaurant brands, including Arby's, Buffalo Wild Wings, Sonic Drive-In, and Jimmy John's.



JOSH SOSLAND
Editor
Milling & Baking News

Pet Ownership, Specialty Formats, and E-commerce on the Rise

Despite challenges, pet industry sales in the U.S. exceeded \$100 billion in 2020 for the first time ever, according to the American Pet Products Association (APPA). Petfood and treats accounted for \$42 billion of that record-breaking total and represented a 9.7% increase from 2019.

Overall, pet ownership has increased in the U.S., according to the APPA 2021-2022 National Pet Owners Survey. APPA estimates 70% of households own at least one pet, up from 67% reported in its previous survey. Illustrating the importance pets hold in our lives, APPA found that 35% of pet owners reported spending more on petfood, wellness-related products, and other pet supplies over the past 12 months than in previous years. Consumer preferences for ethically sourced, environmentally friendly products remain high, with APPA reporting 51% of pet owners said they are willing to pay more for these kinds of petcare products.

Although dry dog food remains dominant in the market with 57% of the sales, several up-and-coming petfood formats—while still a small subset—are growing faster than the overall market. Dehydrated dog food sales in 2020 totaled \$239.9 million, which was a growth of 10.7% over 2019, according to NielsenIQ. Frozen petfood sales were up 14% for a total of \$236.1 million, and fresh and refrigerated petfood sales grew an impressive 20.7% for a total of \$78.3 million in 2020.

Brands launched a total of 569 new petfood and treat products in the U.S. between June 2020 and May 2021, according to Mintel. Tree Top and Mintel partnered on a report detailing key formulation trends seen in the U.S. petfood market. This report found that functional petfood formulas, specifically those claiming digestive health support, are currently coming out on top. Roughly 58% of pet owners who participated in the survey said they are interested in petfoods and treats with “healthy digestion” claims, followed by 52% who are interested in mobility support, 49% in skin and coat health, 46% in immune system support, and 40% in cardiovascular health products.

While the mainstream retail channel—which includes grocery, mass, club, dollar, and military outlets—is still the largest point of sale for petfood and treat products and actually grew 3% last year, e-commerce sales for these products hit \$9.4 billion in 2020, officially overtaking brick-and-mortar pet specialty, according to NielsenIQ. On average, total petfood volume sales on e-commerce grew 47.4% from 2019, with dry food volume sales growing 43.1%, wet food sales growing 49%, and treats leading the growth at 58.7%. This shift increased e-commerce’s share from 21% of the petfood and treat retail market in 2019 to 27% in 2020.

Similar to all other consumer goods industries, sustainable packaging is an important topic in the petfood industry. According to the Pet Sustainability Coalition (PSC), roughly 300 million lb of flexible petfood and treat packages are manufactured in the U.S. each year, of which almost all are produced through co-extrusion and laminating multiple layers of film plastics. These materials are “nearly impossible” to separate to be recycled, the organization said. Because of this, an estimated 99% of petfood packages in the U.S. wind up in landfills rather than recycling streams.

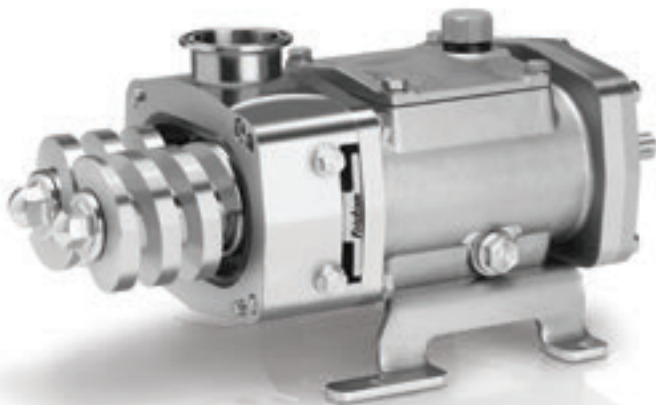
In February, PSC gathered more than 400 attendees at its virtual UnPacked21 conference that touched upon nearly every aspect of the packaging supply chain, from resin and biofilm producers to finished goods manufacturers to retailer partners. Some of the top takeaways from that conference for petfood and treat processors were to increase the recycled content no matter what type of packaging in use, minimize the size of packaging, and reimagine the opportunities that e-commerce might bring to eliminate packaging when possible.

In today’s increasingly proliferating petfood and treat marketplace, brands are answering consumer demands for better nutrition, a variety of tailored options, and more eco-conscious products.

VERTICAL PERSPECTIVES



JENNIFER SAMPLE
Editor
Pet Food Processing



FDS | Dual-duty process and CIP twin screw pump



FKL | High-pressure heavy-duty circumferential piston pump



FL2 | Gentle standard-duty bi-wing lobe pump



FL3 | Suction and low pulsation helical lobe pump

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Your Guide to PACK EXPO Las Vegas and The Processing Zone

After more than a year of virtual events, the largest in-person and most comprehensive packaging and processing event in North America, PACK EXPO Las Vegas, featuring the return of The Processing Zone, takes place in September.

The state of Nevada recently reinstated its mask mandate for public indoor settings, but face coverings are not required outdoors, and there are no capacity or large gathering restrictions as of press time. PACK EXPO Las Vegas and Healthcare Packaging EXPO (Sept. 27-29, Las Vegas Convention Center) will follow the current local regulations and continue to update exhibitors and attendees as things develop to ensure a coordinated effort and successful event for all, according to show producer PMMI, The Association for Packaging and Processing Technologies.

With more than 1,500 exhibiting companies, PACK EXPO Las Vegas, co-located with Healthcare Packaging EXPO, will welcome tens of thousands of people. Register now at www.packexpolasvegas.com.

Breakthrough processing solutions

A can't-miss is The Processing Zone with solutions such as food processing/systems; food safety; engineering, design, and construction services; and more. Attendees can once again start their search for front-of-the-line processing solutions while continuing to solve their packaging challenges, all under one convenient roof. A new processing-specific Innovation Stage will feature sessions focusing on the latest breakthroughs in facility design, spiral immersion systems, and cleaning systems. The Processing Zone is located in the North Hall of the Las Vegas Convention Center.

On the Processing Innovation Stage, **ProFood World** will honor Conagra Brands, Smithfield Foods, B&G Foods, Liffey Meats, and Graphic Packaging International for outstanding sustainability achievements with the Sustainability Excellence in Manufacturing Awards. The award winners will discuss their projects on stage on Monday, Sept. 27, at 3:30 p.m.

MWC, Kraft Heinz, and CTI Foods will share the details of their 2021 Manufacturing Innovation Award projects on the Processing Innovation Stage on Tuesday, Sept. 28, at 3:30 p.m. See the full schedule of all Innovation Stages on pages 16-17 in this issue.

Another can't-miss event is the Cold Pressure Council Annual Conference (Sept. 28-29), which will take place in conjunction with PACK EXPO Las Vegas and Healthcare Packaging EXPO, offering education on the latest in high pressure processing (HPP) technologies. All registrants of this conference will receive complimentary registration to PACK EXPO Las Vegas and Healthcare Packaging EXPO.

Notable Pavilions

The Containers and Materials Pavilion: The latest innovations in paperboard, glass, metal and plastic, flexible and resealable packaging, as well as containers and materials on display.

The Showcase of Packaging Innovations®: Sponsored by WestRock, award-nominated packaging solutions will be on display and located within The Containers and Materials Pavilion in the North Hall.

The Reusable Packaging Pavilion: Sponsored by the Reusable Packaging Association, the pavilion will showcase sustainable packaging solutions to help reduce waste, cut costs and gain efficiency. See innovative reuse solutions from over 30 exhibitors in the Upper South Hall.

The Confectionery Pavilion: The latest trends and technologies relating to aeration, batch refining, shaping, cluster production, and more are located in the Upper South Hall and sponsored by NCA.

The Workforce Development Pavilion: This is PACK EXPO Las Vegas' one-stop shop for resources to strengthen your current workforce and grow the existing workforce. Learn about PMMI U offerings, including popular training workshops. The pavilion is located in the North Hall.

Candy Bar Lounge

Attendees can network, gain insights and recharge at the Candy Bar Lounge, sponsored by Syntegon Packaging Technology and hosted by the National Confectioners Association. The lounge is located in the Confectionery Pavilion, Upper South Hall, Booth US-7201.

A reception will take place on Tuesday at 3:30-5 p.m.

PACK EXPO Las Vegas Show Hours

Monday, Sept. 27	9:00 a.m. – 5:00 p.m.
Tuesday, Sept. 28	9:00 a.m. – 5:00 p.m.
Wednesday, Sept. 29	9:00 a.m. – 3:00 p.m.



PPWLN's New World of Work

Everyone has had to work differently over the past year, with some adjustments driving long-term transformations in the way we work. Things like increased digitalization and automation on the plant floor, the push for diversity and gender parity, and how to attract the next generation workforce—together are creating the new world of work.

The **Packaging & Processing Women's Leadership Network (PPWLN)** breakfast at **PACK EXPO Las Vegas and Healthcare Packaging EXPO** (Tuesday, Sept. 28) will bring together a panel of experts to discuss different perspectives on how to thrive in this fast-changing world. First, PPWLN welcomes Tracey Noonan, co-founder and CEO of Wicked Good Cupcakes, as its keynote speaker.

Noonan and her daughter turned a small home-based bak-



PACKAGING & PROCESSING
WOMEN'S LEADERSHIP NETWORK

Sponsored By 

ing business into a multimillion-dollar corporation through creativity, perseverance and an investment from Shark Tank's Kevin O'Leary. Recently acquired by Hickory Farms, Noonan will reflect on her experience of scaling an e-commerce business, managing a growing workforce, and her insights into how the food and beverage industry is evolving.

Following her keynote, Noonan will join Yolanda Malone, vice president of global RD Foods at PepsiCo, and AJ Jorgenson, vice president of strategic engagement at The Manufacturing Institute, for a candid conversation about the new world of work, what it means to the future of manufacturing, and what we can do to make a difference.

RSVP: www.cvent.com/d/8mqpnw

Note: To attend, you must be registered for **PACK EXPO Las Vegas**. Register at www.packexpolasvegas.com.

PACK to the Future Exhibit Gives Packaging History Its Due

The brand-new **PACK to the Future** exhibit takes attendees on a journey through the evolution of packaging and processing, how the industrial and scientific revolutions led to rapid innovations and mass production, and how the digital revolution is shaping the future. This curated exhibit includes nearly 30 historic packaging and processing machines dating from the late 1890s to the late 1970s with imagery supplied by museums and instantly recognizable consumer packaged goods brands including Coca-Cola, General Mills, Kellogg, Hormel, Anheuser-Busch, and Merck. The **PACK to the Future Stage** will highlight future technology, including innovative sustainability initiatives, e-commerce solutions, smart packaging, and artificial intelligence.

Monday, Sept. 27

No Strings Attached: When Packaging Machinery Goes Wireless—10:30 to 11:00 a.m.

The Evolution of Pharmaceutical Packaging—Past, Present, and Future—11:30 a.m. to 12:00 p.m.

Using AI to Achieve the Next Level of Operational Efficiency for Your Packaging Machines—12:30 to 1:00 p.m.

Unpacking the Cannabis Opportunity—1:30 to 2:00 p.m.
Innovative Heating and Sealing Systems Needed on Packaging Machinery to Process Sustainable Materials—2:30 to 3:00 p.m.

Pain Points for Brand Owners: How Can Smart Packaging Make a Difference?—3:30 to 4:00 p.m.

Tuesday, Sept. 28

Re-Positioning Packaging as the Environmental Solution—10:30 to 11:00 a.m.

How Can the Industrial Edge Deliver New Insights for Packaging Machines—11:30 a.m. to 12:00 p.m.

Building a Stakeholder Coalition for Policy Progress: The Recycling Leadership Council—12:30 to 1:00 p.m.

The Transition of Packaging to a Digital World Through Data—1:30 to 2:00 p.m.

No Strings Attached: When Packaging Machinery Goes Wireless—3:30 to 4:00 p.m.

Wednesday, Sept. 29

Next Generation Industrial LiDAR Sensing Technologies Coming to the Packaging Industry—10:30 to 11:00 a.m.

Seeing Through Walls: Harnessing Augmented Reality to Improve Machine Maintenance and Repair—11:30 a.m. to 12:00 p.m.

The **PACK to the Future Stage** is located at N9830. Presentations occur hourly on each day of the show, with a schedule listed above.*

**Schedule as of 8/17/2021*

Read an article on the backstory behind the **PACK to the Future** event, two years in the making, at pwgo.to/7245. Or visit pwgo.to/7246 to hear a podcast discussion on the subject between PMMI's Sean Riley and exhibit curator Jack Aguero.



Technology Excellence Awards Honor Achievement



The always-of-interest Technology Excellence Awards return to PACK EXPO Las Vegas and Healthcare Packaging EXPO 2021. The awards recognize exhibitors' innovative technology they have developed that has not previously been shown at a PACK EXPO or Healthcare Packaging EXPO.

Voting will take place live, starting when the show opens on Monday, Sept. 27 at 9 a.m. It will continue through noon on Tuesday, Sept. 28. There are three ways to vote: onsite, on the official show mobile app, and online. During this time window, visit pwgo.to/7247 to cast your vote among the finalists.

The Technology Excellence Awards 2021 finalists are as follows:

Food/Beverage Finalists

- **CanReseal® Beverage.** Can-end design adds threading just below the double-seam so consumers can screw and unscrew the cap. Canovation, Booth N-9430
- **High Speed Case Packer for Thermoformed Trays.** High-speed thermoform case packer runs at 264 trays/min for ultrafast upstream thermoformers. Delkor Systems, Inc., Booth C-3814
- **KeelClip™1600.** Paperboard clip packaging machine solution for multi-packs of beverage cans fits CPGs' sustainability agendas. Graphic Packaging International, Booth C-2442

General Packaging Finalists

- **Simpli-Cut®.** Solves two major weaknesses inherent in the design of traditional roll-fed labelers and offers exceptional performance and flexibility. P.E. Labellers, Booth C-3122
- **XPlanar Flying Motion System.** Flying motion control system unlocks new possibilities in packaging, food & beverage, and pharmaceuticals. Beckhoff Automation LLC, Booth SL-6149
- **Partbox.** 3D printer replaces held part inventory, ensuring spare part availability and eliminating costs and risks of waiting times, logistics, transport. Schubert North America LLC, Booth SU-7651

General Processing Finalists

- **HPP In-Bulk Technology.** Allows high-volume processing of HPP beverages in bulk, prior to bottling. Hiperbaric, Booth SL-6271
- **Hygienic Spiral Conveyors.** Hygienic spiral conveyors use only side drive, edge-driven technology. SideDrive Conveyor Co., an NCC Automated Systems Company, Booth SL-6127
- **ROCKET RACK®.** Pre-engineered, factory fabricated sanitary support system for process pipe, electrical conduit, and other installations. Rocket Rack, Robroy Industries, Booth SU-7122

Forums Give Attendees Voice, Encourage Interaction

The Forum, a growing staple in the PACK EXPO portfolio of trade shows, returns to PACK EXPO Las Vegas in the Central Hall as an interactive industry knowledge exchange.

The Forum offers free, 45-minute learning sessions on the latest industry trends, including hands-on activities, small group discussions, and Q&A each day of the show.

Monday, Sept. 27

Driving Packaging Line Performance—10:30 a.m. to 11:15 a.m.

Where are You on the Automation Timeline?—11:30 a.m. to 12:15 p.m.

New Innovation and Partnership Models Propel Contract Manufacturing Growth in a New Decade—1:30 p.m. to 2:15 p.m.
Risk Assessment of Legacy Machinery—2:30 p.m. to 3:15 p.m.

Tues., Sept. 28

Cybersecurity: Know Where to Look for Vulnerabilities—10:30 a.m. to 11:15 a.m.

Risk Assessment of a 3D Model Machine—11:30 a.m. to 12:15 p.m.

The Weak Link: Will Your End-Users Prevent, or Cause a Cyber Attack—1:30 p.m. to 2:15 p.m.

Go Big or Go Home—Leveraging Resources in Today's World of Challenging Food and Beverage Manufacturing—2:30 p.m. to 3:15 p.m.

Key Trends in Robotics Applications—3:30 p.m. to 4:15 p.m.

Wed., Sept. 29

Getting the Most Out of the New PMMI ProSource Online Directory—10:30 a.m. to 11:15 a.m.

Latest Global Food Packaging Trends (Post-COVID Trends)—11:30 a.m. to 12:15 p.m.

PACK EXPO Xpress

For those unable to attend in person, PMMI now offers virtual aspects of the live event via PACK EXPO Xpress (www.packexpolasvegas.com/pack-expo-xpress), where you can search for products and innovations in digital showrooms and connect with solutions suppliers during the event, no matter where you are.





INNOVATION STAGE

Processing Zone Innovation Stage presentations are indicated in blue.
Innovation Stage schedule as of August 9th, 2021

The Innovation Stages at PACK EXPO Las Vegas bring you the latest advances taking place across the industry. Check out these 30-minute sessions to discover coming trends and technologies that need to be on your team's radar.

MONDAY, SEPTEMBER 27, 2021

10:00 AM

2021 and Beyond: Where Packaging Sustainability Meets E-commerce	Dassault Systemes
How to Automate a Sustainable, Minimal Material Packaging Solution for Cans	Graphic Packaging International
Sealing The Deal: Unlock Savings Without Compromising On Speed	Shemesh Automation

10:30 AM Processing Zone

State of the Industry: How Food and Beverage Processors Move Past the Pandemic	ProFood World
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11:00 AM

Connecting Your Supply Chain Network to Build Resilience	Specright
Eye on the Environment: Combating Food Waste with Flexible Packaging	Glenroy, Inc.
Conventional vs. Robotic Palletizing: Making the Right Choice	Honeywell Intelligrated

11:30 AM Processing Zone

Using IoT to Improve Process Cleaning System Efficiency	Sani-Matic
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12:00 PM

State of Snacking: Opportunity and Innovation Abound	SNAC International
Improving the Future of Delivery Today	Rehrig Pacific
Advances in Sustainable Hotmelt Adhesives	Henkel Corporation

1:00 PM

CI Successes from 700 Food, Beverage and CPG Manufacturers	Redzone Production Systems
How to Upgrade Your VFFS Bagger from Heat to Ultrasonic Technology	LAKO Tool and Manufacturing, Inc.
Protecting your Products, Brand and Reputation in an Online World	Amtcor Flexibles North America

1:30 PM Processing Zone

The Latest HPP Packaging Innovations for Juices & Beverages	Hiperbaric
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2:00 PM

Sustainable Adhesive Free Labeling	Felins, Inc
Moving Away From Shrink Wrap: How Bumble Bee Seafood Is Transitioning To More Readily Recyclable Packaging	R.A Jones
Depalletizer Machine Condition Monitoring via IIoT Solutions to Maximize OEE	Emerson

2:30 PM Processing Zone

Food Safe Facility Drainage Design	FoodSafe Drains
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3:00 PM

Is a Compostable Pouch the Right Package for You?	Presto Products Company
Easy Machine Development and Customization with an Open Automation Ecosystem and App Store	Bosch Rexroth
Training : Investing in Manufacturing Performance & Operational Resilience.	Premier Tech

3:30 PM Processing Zone

Sustainability Excellence in Manufacturing Awards	B&G Foods, Conagra, Smithfield, Liffey Meats
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4:00 PM

Analytics based Asset Performance Management & Remote Monitoring for the Enterprise	LLumin, Inc.
Reimagining Plastic Mailers with Innovative Fiber-based Pouches and on-demand Automation.	WestRock
Optimize Packaging Operations, Ensure Compliance and Protect your Brand	Markem-Imaje

TUESDAY, SEPTEMBER 28, 2021

10:00 AM

Vinyl-free Blister Solution, Designed to be Fully Recyclable	Klöckner Pentaplast, Health & Protection and Durables
New Guide Rail System Tackles Safety Concerns & Product Guidance Issues	Span Tech
A Look Back at Track: The Evolution of Intelligent Transport Technology	Beckhoff Automation

10:30 AM Processing Zone

Improve Performance with Spiral Immersion Processing	FPS Food Process Solutions Corp
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11:00 AM

Improving Packaging and Line Efficiency for Food Bowl and Tray Applications	WestRock
Industry 4.0's 'Factory of the Future' Is Already Here	Domino Amjet Inc.
Sustainability in Healthcare Packaging: Opportunities vs. Challenges	Amcor Healthcare Packaging

11:30 AM Processing Zone

High Pressure Processing (HPP) - Latest Trends including Packaging, Plant Based Foods, Pet Food and Red Meat	JBT Corporation
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12:00 PM

Beyond the Machine: Solving Manufacturing Challenges Through Advanced Digital Solutions	Rockwell Automation
Resistance is Futile: Trayless Ground Meat is the Next Frontier in Sustainability	Harpak-ULMA Packaging
Bottling 101: Are You Getting the Maximum Performance from Your Packaging Line?	POWER Engineers

1:00 PM

New Automation Technology Solutions	Syntegon Packaging Technology
Can Innovation Curtail the Plastic Apocalypse?	Canovation
How has COVID-19 Changed the way we Audit our Suppliers?	International Society of Beverage Technologists

1:30 PM Processing Zone

Manufacturing 2022 and Beyond—Why Automation Alone is Not Enough	ProFood World
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2:00 PM

How Sustainable Label Options Can Help Achieve Your Goals	Fort Dearborn Company
Smart Innovations for Food and Beverage Manufacturing	Siemens Digital Industries
Robotic Valve Placers for Safe Consistent Production	nVenia

2:30 PM Processing Zone

The Power of a Systematic Approach to Process Improvement	Deville Technologies
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3:00 PM

Hot Melt Adhesive with Improved Low Temperature Performance	Bostik
Digital Transformation	SICK, Inc.
Requirements to Consider for Code Verification	METTLER TOLEDO

3:30 PM Processing Zone

Manufacturing Innovation Awards	MWC, Kraft Heinz, CTI Foods
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4:00 PM

Sustainable Bundling for E-Commerce	Felins, Inc.
Not Business as Usual Automation	Schneider Electric
Lightweighting and Beyond	Amcor Rigid Packaging

WEDNESDAY, SEPTEMBER 29, 2021

10:00 AM

Using Quantitative Leak Test Data to Enhance Certainty of Shelf Life	INFICON
Enabling Freedom of Design by Leveraging Wireless Technologies	SMC Corporation of America
How Market Forces are Reshaping the Contract Packaging / Manufacturing Industry and the Brands it Serves	International Society of Beverage Technologists

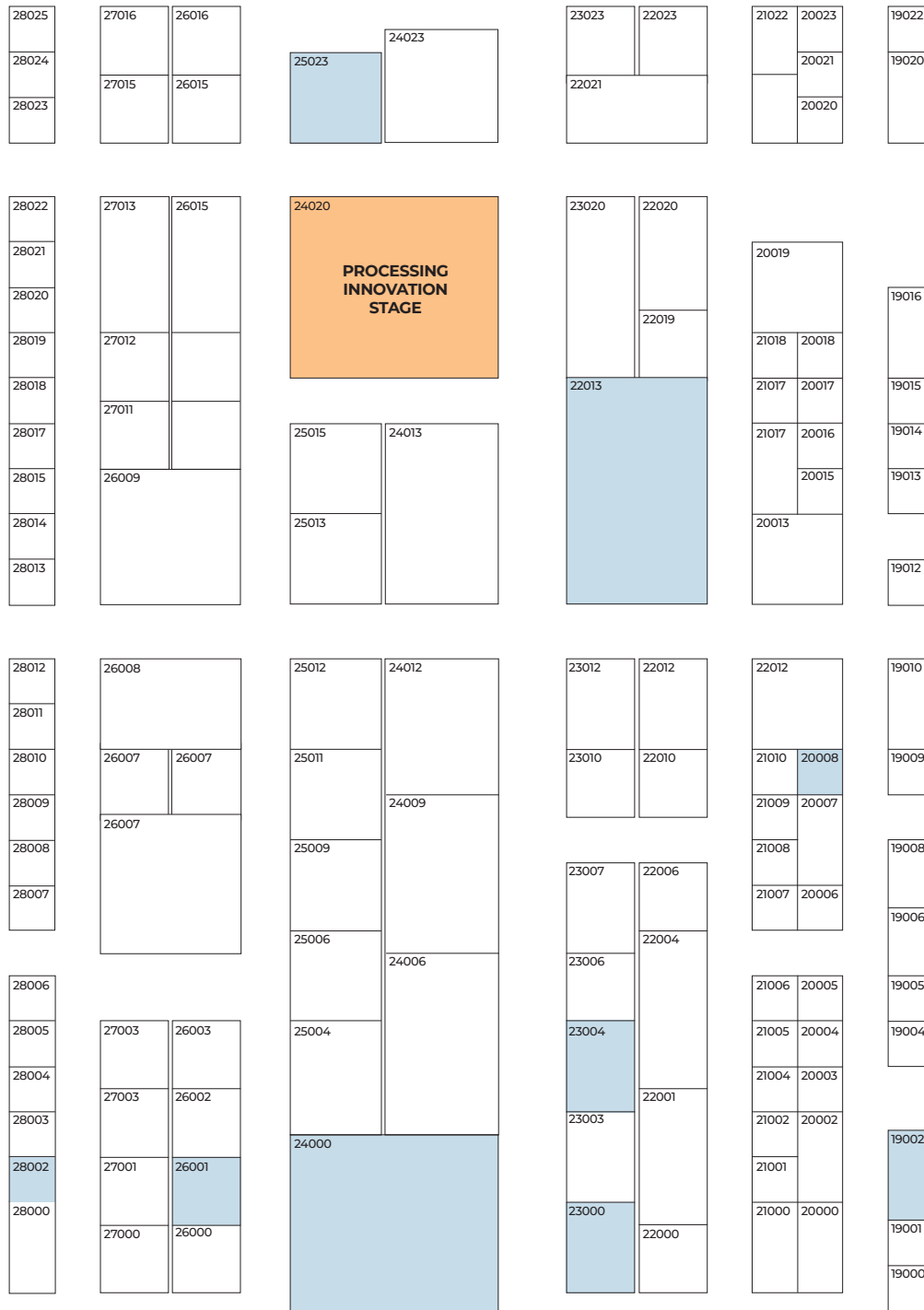
11:00 AM

The Future of Snack Packaging	SNAC International
How OEMs can use Machine Data to Add more Services to their Offerings	LLumin, Inc.
Innovative Packaging Solutions for a Sustainable Future	Flexopack S.A.

12:00 PM

Packaging Automation Takes Flight with Flying Motion Technology	Beckhoff Automation
Curbside Recyclable: Meeting eCommerce Demand Sustainably	Georgia-Pacific Corrugated
To Be Determined	To Be Determined

The Processing Zone Floor Plan



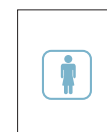
This way to the following destinations:



- Food Concessions
- PACK to the Future Exhibit
- Showcase of Packaging Innovations
- Robotics Showcase



▲ **ENTRANCE TO NORTH HALL**



Booths located in the Central Lobby

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PROCESSING ZONE EXHIBITORS

PACK EXPO Las Vegas Processing Zone Exhibitors*

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AMVT LLC, N-25009
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Axiflow Technologies Inc., N-20013

B

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D

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Douglas Machines Corp., N-26009

E

Enight Solutions: Enight, Bematek, and Automation Division, N-22004

F

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G.J. Olney Inc., N-20019
Gleeson Constructors & Engineers LLC, N-19002

Graco Inc., N-19009

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Holloway America, N-21008
Holloway America, N-21009
Honle UV America Inc., N-21007
HRS Heat Exchangers, N-20002

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icotek Corp., N-19016
INFICON, N-19006
INFINI-MIX Process Solutions, N-23007

J

JL Packaging Corp., N-20016

K

KPM Analytics, N-22000

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SmartSpiral® Monitoring System

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Phone: 540-253-1806 • Email: sales@ashworth.com

www.ashworth.com/profood

The SmartSpiral® Monitoring System

Ashworth offers the SmartSpiral® Monitoring System – an innovative application that provides real-time remote monitoring using predictive analytics to minimize production downtime. The SmartSpiral allows access to multiple spiral/plant locations from your phone and tablet to continuously monitor spiral temperature, belt tension, cage power and features the industry's first, patented bottom bearing wear sensor. To learn more on how we can help you avoid unplanned downtime, visit us at: <https://www.ashworth.com/smartspiral-site-audit> or call us at 800-682-4594.

The PosiDrive Spiral® System

Ashworth's PosiDrive Spiral® System features a unique drive design that is designed for heavier loads, eliminates jam-ups, helps to streamline packaging and maintains consistent belt tensions between sanitation cycles. Reduce downtime and improve efficiency with the PosiDrive Spiral, an affordable solution for new and existing spiral applications. To see how our drive design works, visit us at: <https://www.ashworth.com/posidrive-spiral> or call us at 800-682-4594.

ExactaStack®

Ashworth's ExactaStack® is an affordable belt option for standard and wide belt stackers, for companies that need a cost-effective, high quality food processing solution. As your industry partner, Ashworth offers global expertise to optimize the functions and mechanics of food processing conveyor systems that are key to keeping your business running smoothly. To learn more, visit us at: <https://www.ashworth.com/exact-stack> or call us at 800-682-4594.

Omni-Grid® 360 Weld

At Ashworth, we "build-in hygiene." Our Omni-Grid® 360 Weld belts are engineered to meet a strict hygienic design criterion. Our patented coining process ensures a corrosion-resistant, mechanically smooth, and stable belt that's easy-to-clean, offers added strength, reduces wear, and increases belt-life. Our goal is to eliminate areas where bacteria can grow making overall food processing safer and more efficient. To see how we "build-in hygiene," visit us at: <https://www.ashworth.com/omni-grid-360-weld> or call us at 800-682-4594.

Ashworth Bros., Inc., headquartered in Winchester, Virginia, is the only conveyor belt company that manufactures and services both metal and plastic belting for straight running, turn-curve, lo-tension and self-stacking spirals—offering customers the best solution for their specific requirements. Celebrating 75 years of revolutionizing the future of conveyor belts, Ashworth continues to lead the market with the most conveyor belt patents in the food processing, can making, and material handling industries. Companies around the world depend on Ashworth's quality products, reliable customer service, and innovative solutions to resolve problems and increase productivity. Ashworth Factory Service offers a full range of engineering services, including system refurbishment, troubleshooting, and belt installation.





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Tubular Drag Cable & Disc Conveyors have piqued the curiosity of food processors around the world.

With regulating authorities on high alert, food manufacturers are embracing the benefits of enclosed conveying.

Cablevey Conveyors are different from competing technologies because they are enclosed, easy on materials and are easy to maintain. Our conveyors gently move your fragile specialty materials through an enclosed tube without the use of air with virtually no material breakage occurring. Cable & Discs convey up to 2000 cu. ft./ hour in tubes. Nuts, Breakfast Cereal and fragile materials are handled easily. Flexible layouts using multiple inlets & discharges maintain blends and avoid product degradation. The majority of our conveyors operate with drive units 5 Horsepower- or less!

For energy-efficient systems operation our systems are hard to compete against.

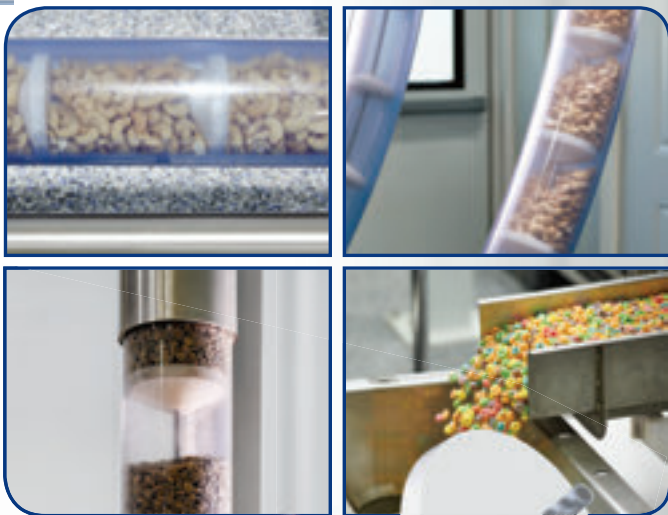
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Gentle Clean Reliable Conveying

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**Worldwide Experts in
Cable and Disc
Conveying Solutions.**

50

Years in
Business

66

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Served

1,000+
Products
Moved

32,000+
Conveyors
Commissioned



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Waffle Machine



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CPM Wolverine Proctor LLC

251 Gibraltar Road Horsham, PA 19044 • USA

Phone: 215-443-5200 • **Email:** Sales@cpmwolverineproctor.com

www.cpmwolverineproctor.com

For over 125 years CPM Wolverine Proctor has been manufacturing thermal processing equipment for Cereals, Snack foods, Nuts, Vegetables, fiber, rubber, chemical and pigment Industries. We are the leading supplier to the frozen egg patty and breakfast market. Offerings Impingement Ovens, patented JetZone Fluidized Bed Dryers, Puffers, Toasters, Nut Roasters and Dryers as well as our latest SCFIII Sanitary Dryers and Coolers for the highest levels of Food Safety. This equipment is designed to be the most sanitary designs on the market today. Since our beginning, producing quality equipment has been our main focus.

Wolverine Proctor – TSA Griddle Systems Merger:

We are pleased to announce the merger of CPM Wolverine Proctor and CPM TSA Griddle Systems. As we expand our RTE breakfast line, we welcome the opportunity to showcase our line of pancake and waffle machines. Just some of the added benefits include: increased manufacturing space; global coverage; and additional support in areas such as field service, customer service, and engineering. Perfect waffles, pancakes and French toast are what your customers and consumers want, and, with a TSA Griddle System, that's what they get. Our equipment is configured to your specific process, optimizing your plant's efficiency, ensuring high-quality output and uniformity, and giving you the smallest carbon footprint possible. With a host of features and capabilities we are proud to say TSA Griddle equipment is Made in the USA.

Technical Support:

CPM Wolverine Proctor maintains a fully equipped and instrumented laboratory to provide the most accurate analysis of your roasting, toasting, drying and cooling processes in real time. The test facilities are available to evaluate new products and processes and to confirm drying or cooling data on existing machines for formulation development and future expansion. Our (2) Technical Centers are located in the USA and the UK.

CPM Wolverine Proctor customer service department has spare parts specialists available to assist you in obtaining genuine Wolverine Proctor replacement parts for your machinery, including most of the vintage machines still in operation.



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FPS Food Process Solutions

7431 Nelson Road, Unit 130 • Richmond, BC • Canada

Phone: 604/232-4145 • Email: sales@fpscorp.ca

www.fpsc corp.ca

FPS Food Process Solutions is a global leader of turnkey industrial freezing and cooling equipment based in Richmond, BC, Canada about 5 miles from Vancouver. FPS has a combined 450,000 sq. ft (41,800 sq. meters) of space, including its Canadian headquarters, 10 manufacturing and warehouse facilities as well as international sales offices across five continents. We maintain sheet metal fabrication, a machine shop, specialized insulated enclosure manufacturing and control panel assembly in-house so each component is specifically designed for freezing and cooling applications.

We produce spiral, IQF, impingement, CF/VRM freezers and the game changing Spiral Immersion System (SIS)TM. Together with our subsidiaries we also provide end-to-end freezing and chilling solutions.

We Exist To Revolutionize Hygienic Standards

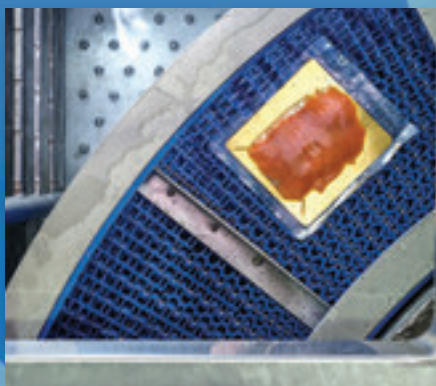
At FPS, our vision is to use the most leading edge technology and innovation to not only deliver you the best possible product but to also move our industry forward. Our focus on hygiene is the foundation for safe food production. Our purpose is to revolutionize food processing and ensure the cleanest and safest global food production for everyone.

We Promise To Set A New Standard Together

We invest in our people and partners, we believe strong collaboration always leads to the best results and we strive to ensure the highest levels of hygiene are always maintained. We aim to raise the bar in our culture, in client relationships, in the level of service offered and global hygienic standards. We believe that together, we will set a new standard.

We Believe That Through Collaboration We Create Value

We believe that through collaboration and partnership, we create value. When you enter into a relationship with us, you join our family. We promise to exceed all your expectations and work collaboratively with your staff, contractors and also your external suppliers.



FPS FOOD PROCESS SOLUTIONS



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Key Technology, Inc.

150 Avery Street • Walla Walla, WA, 99362 • USA
Phone: 509-529-2161 • Email: product.info@key.net
www.key.net

Key Technology provides food processors with integrated solutions for their automation needs, including digital sorting, specialized conveying and process systems tailored to individual requirements.

The new VERYX® 2.0 family of digital sorters achieves a superior level of accuracy for foreign material and product defects detection, classification and removal. With unique features like full-surface inspection of every object in the product stream, multi-sensor Pixel Fusion™, and its powerful Key Discovery™ data analytics capabilities, VERYX advances product quality management at the same time it maximizes process yield.

Key Technology also engineers and manufactures a complete range of conveying systems for optimal handling of food products: industry-leading Iso-Flo® vibratory conveyors, the new line of Zephyr™ horizontal motion conveyors, Impulse® electromagnetic conveyors; in addition to solutions for optimal sizing, grading and separating, and systems for blanching, air cooling, air cleaning, washing and feeding.

We don't just supply equipment. We provide complete solutions, supported for optimal performance and returns through their lifecycle. Our services include line design and system integration, application testing, installation, start-up and training. Plus, customizable service and parts packages through our SupportPro® organization for equipment maintenance, repairs, audits, remote system monitoring and more.



PROGRESS COMES WITH CLARITY

Key Technology shares your vision for progress. We share your vision to avoid waste, to ensure safety standards and to maximize yield, profits and efficiency. Bringing together the world's leading sorting and conveying systems along with cutting-edge data and intelligence, our industry experts can help you move from complex or disparate technologies to a synchronized and easy-to-operate platform. Maximize uptime and gain peace of mind with a single, proactive long-term partner.

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SORTING | CONVEYING | INTEGRATED SOLUTIONS

Clear Vision, Clear Progress





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Krones Process Group North America

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We Know Process.

With combined experience spanning over 165 years, Krones Process Group North America knows sanitary process solutions.

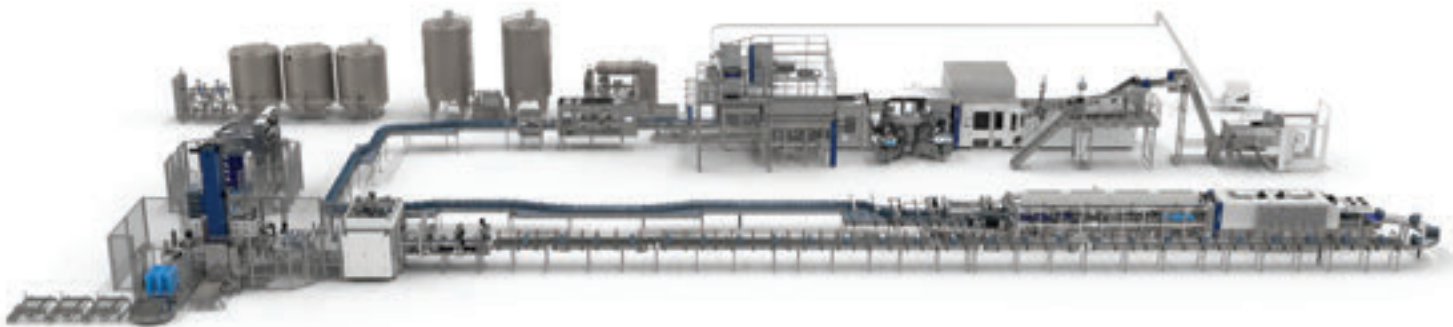
By uniting the best process system design expertise in the industry, our North American subsidiaries – Javlyn Process Systems, W.M. Sprinkman Corp, and Trans-Market – leverage combined resources and knowledge to better support our customers.

The group is backed by the global depth and experience of Krones, creating a one-stop shop for the beverage, food, dairy, HPC and pharmaceutical industries.

Our combined expertise supports the entire process: from engineering, to automation, to fabrication, installation, and full regional after-market LifeCycle Services support. We deliver the highest quality found in the industry, tailored to fit our customers' specific needs.

Our offerings include:

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- **Installation**
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- **Fabrication**
Tanks | Brewhouses | Skidded Systems
- **Lifecycle Services**
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Flexible solutions for your processing needs

The Krones Process Group North America provides sanitary process system expertise backed by the global depth and experience of KRONES. We understand each product has its own unique needs, and we offer tailored solutions from a single source — no matter your location.

Processing Solutions ■ Automation ■ Installation ■ Fabrication ■ Lifecycle Services

We know process.





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www.marchantschmidt.com

Marchant Schmidt is a global leader in the manufacture of Industrial Food Cutting Solutions. For more than 50 years, we have made the most robust equipment to maximize your return on investment.

With a strong engineering focus, we produce Hygienic Automation solutions and are known to be direct food contact specialists. We are experts in Cheese Converting Equipment and recognize that rate, yield and appearance all impact your bottom line. Our industrial Washing Systems ensure your process is consistently clean, and our Specialty Food Cutting Machines are ideal for challenging applications in bakery and confectionery.

We are committed to successful projects and maintain an experienced team of service technicians, programmers, mechanical and electrical engineers, and robotic specialists along with our field installation crew. Family values drive our innovation, quality and responsible customer partnerships. Our knowledgeable team is focused on our customer's overall business success.



MARCHANT SCHMIDT

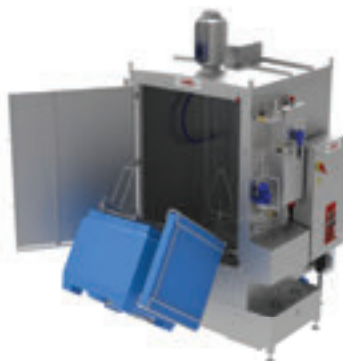
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- Labor savings
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- Simple to operate



P100 Pallet Washer

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Precision Food Innovations (PFI)

Algona, IA • San Antonio, TX • USA

Phone: 515/295-7265 • Email: sales@pfi-global.com
pfi-global.com

Precision Food Innovations (PFI) is an employee-owned company specializing in bulk material handling and conveying equipment for the food processing and packaging industries. Acquisitions of Meyer Industries and KOFAB companies has empowered PFI to offer industry-best, customized equipment along with creative solutions to help customers overcome even the most difficult application challenges.

We offer a wide array of time-tested, proven conveying solutions for belt, vibratory, horizontal motion and bucket conveyors. Platforms, product dumpers and other supporting equipment round out our range of products giving them the ability to integrate all your conveying needs.

Food manufacturing requires high sanitation standards and PFI's commitment to those standards is a key piece of what sets us apart from the competition. As the requirements for sanitary conditions in the food world keeps growing, we are positioned to offer innovative designs to fill those needs.

Innovation goes hand in hand with sanitary design. PFI develops better solutions for our customers by partnering with them to exceed their requirements. An emphasis on innovation means we work hard to provide equipment that brings the highest level of efficiency, safety and productivity to the job site.

Customer focus is at the heart of PFI. By exceeding customers' expectations of product performance and delivering on time and on budget, PFI's trustworthy reputation provides customers the reassurance that they are our number one priority. As an employee owned company, each of our employees understand the value of working together, how it benefits the customer, individual employee, and the team. At PFI, the goal is to have customers who are excited about doing business with us and know that we care about their food production needs.

By executing the highest in sanitary design standards, superior quality control and teams dedicated to customer service and satisfaction,
WE KEEP IT MOVING®



AHEAD of the CURVE

CURVEYOR features custom-built powered belt turns for the food processing and material handling industries. Our center-drive belt design allows the conveyor to run in either direction, assuring bi-directional product flow. Curveyors are available from 30 to 180 degree turning radius and custom designed to fit your belt width needs. Contact us to learn more.



LOW-MAINTENANCE

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belt replacement in 30 minutes



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Pallmann Industries, Inc.

101 Alexander Ave, Box 13 – Docks 22/23, Pompton Plains, NJ 07444 • USA

Phone: (973) 471-1450 • **Email:** info@pallmannindustries.com

www.pallmannindustries.com

PALLMANN industries, part of the Pallmann Group of companies, is a leading manufacturer for size reduction machines and systems for the process industries.

PALLMANN develops and manufactures machines and complete systems according to customer requirements or as standard solutions for the preparation of almost any material as well as recycling products.

PALLMANN Industries has access to one of the world's largest research and technology centers as well as a training- and service center. A downstream laboratory analysis of the test material as well as the preparation on a production scale is possible.

In addition to the manufacturing facilities in Europe and South America, PALLMANN Industries operates a world-wide spare part-and-service network including a new and expanded service, spare parts and rebuild center in our Pompton Plains, NJ location.

Machine Offerings

PALLMANN offers a large line of turbo mills, pin mills, hammer mills, screen mills and double stream mills for many different applications and materials for the pet food, candy/confections, herbs and vegetables, sugar, spices and cellulose markets. PALLMANN engineers and supplies complete installations for any required capacity.

Complete Systems Support

PALLMANN system solutions for the process industry are successfully in operation worldwide. In addition to the comprehensive line of single machines, PALLMANN, as a systems supplier, manufactures and delivers complete systems. What is exceptional is that all key components of the machines and systems are manufactured from one source to include the most up to date automation and control systems. Starting with engineering support in the early phases, the project continues with project management throughout the process including during startup and system acceptance.





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Spokane Industries

3808 N Sullivan Rd, Bldg 4 • Spokane Valley, WA 99216 • USA
Phone: 509/921-8868 • Email: Ken@SpokaneIndustries.com
www.SpokaneIndustries.com

Spokane Industries was founded in 1952 in Spokane, Washington. Serving customers for 70 years!

We are a stainless-steel equipment manufacturer, specializing in custom engineered tanks, vessels, and equipment. We service a wide variety of industries in addition to food processing including: water, wine and spirits, aviation fuel, defense, biochemical, pharmaceutical, cosmetics, and agricultural. This experience opens up ideas that can be cross-pollinated to provide new solutions to the food products industry.

Our engineering team is the foundation of the commitment to our customers. Using state-of-the-art solid modeling tools, they embrace customer challenges, imagining innovative solutions that are on the leading edge. We perform ASME Pressure Vessel & UL Code certified design. If product support is required, our team will assist you and get the issue resolved quickly! We are committed to your complete satisfaction!

Our production team has the experience to complete the job, on time, and on budget. Our fabricating expertise shows in the high-quality of the completed product.

We look forward to starting, or continuing a business relationship with you!



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Durability means our compressors are bulletproof—built to last. Driven by the design of our legendary air end, you will find Sullair compressors all over the world standing the test of time and running just like they did on day one.

Performance means ease of operation, energy savings and all the innovations you need to optimize your compressed air system.

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Distributieweg 10

4906AD Oosterhout • The Netherlands

Phone: +31 88 5235400 • **Email:** sales@tanis.com

www.Tanisconfectionery.eu



As a world-leading supplier of production lines for making gummies and jellies, Tanis uses its wealth of know-how in tailoring solutions for every need. Our service includes everything from co-developing unique recipes to piecing together the right production equipment, whatever the scale of your output.

Making gummies and jellies is a very sensitive process and we utilize our 25 years of experience ensuring every element in your production line is fit for your specific purpose. From preparation, cooking and blending to moulding, conditioning and finishing, each piece of expertly engineered machinery talks to the other, and to you, so production is always perfectly orchestrated. Whether you go for one of our state-of-the-art robotic systems or something with a greater degree of manual involvement.

There is currently an explosion of desire for 'functional' candies containing health-enhancing ingredients such as vitamins, minerals, hormones and CBD oil. When producing these, it's essential to avoid cross-contamination of conflicting supplements. For example, you don't want energy-boosting ingredients finding their way into products designed to induce sleep! The greatest risk of cross-contamination occurs during the moulding process. Tanis has solved this by developing unique non-starch plastic molds which, unlike standard starch molds, can be hygienically cleaned between batches to leave no residue. The removal of starch from the moulding process also eliminates spread of starch dust around your production facility, while the absence of a starch-handling system means less floor space is required.

As always in gummies and jellies production, one change can easily impact other stages in the process. Using non-starch moulding trays calls for different techniques elsewhere in production, which is why we've carefully developed complete non-starch lines.

Whether you're interested in producing gummies and jellies with active ingredients, low sugar, special flavors and finishes or anything else, we look forward to fine-tuning the right solution for you.



KEEPING FOOD SAFE SINCE 1923

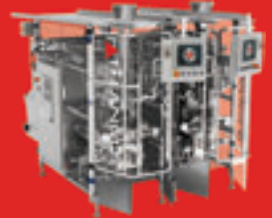
Rely on nearly a century of sanitary packaging experience. Our next generation of VFFS baggers are versatile, smart and sanitary. All in a small footprint. And ready to serve you for the “next” 100 years.



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Triangle Package Machinery Company

6655 West Diversey Ave • Chicago, IL 60707 • USA

Phone: 773/889-0200 • Email: info@trianglepackage.com

www.trianglepackage.com

Since 1923, Triangle has built a legacy of designing and building sanitary packaging equipment that has stood both the test of time as well as harsh washdown environments. We're still servicing machines that have been running in the field since the 1950s. Today the family's third generation carries on that tradition with superior engineering, a world-class manufacturing facility in Chicago, IL (USA) and unparalleled customer support.

VFFS Baggers

Keeping food and workers safe are our top priorities. Our vertical form-fill-seal baggers are designed with sanitation and ease-of-use in mind. Triangle baggers meet USDA/3A and FSMA standards. All models come with an open, accessible design, sanitary forming tubes and sloped surfaces for easy run-off during washdown. Easy-changeover features include no-tool removal of forming tubes, sealing saws and film rolls, allowing you to run multiple SKUs, package styles and materials, quickly.

Premade Pouch Filler/Sealer

For pre-made pouch applications, our rotary pouch machine is designed to run various styles, including Doy bags, and has the ability to store up to 48 recipes on the HMI.

Inline Weighers

Offering unmatched accuracy and speed, our family of inline combination weighers provides even product distribution, leading to fewer missed cycles compared to traditional circular multihead weighers. In addition, our inline weighers mount directly on top of VFFS baggers, saving valuable floor space and eliminating the need for costly mezzanines.

Horizontal Cartoning Systems

Our Flex 1 cartoning solution is ideal for bag-in-box applications such as cereal, rice, cake mix and more. Key features include quick and simple 3D changeover, single- or twin-pack bag capability, servo drives, and a compact footprint. Pairing a Triangle inline weigher and VFFS bagger with this compact cartoner provides a great integrated bag-in-box system... all in a small footprint.

Superior Service & Support

Your true relationship with Triangle starts when your machine is installed in your facility. Field service is available out of our Chicago headquarters as well as regionally throughout the US. Our 22 service technicians offer an average tenure of 18 years servicing Triangle equipment. Spare parts are manufactured in our Chicago facility and are typically shipped the same business day.





**Affinity®
CD-L Dicer**
2-Dimensional
Cuts; Newest in
the Affinity Line

**Affinity®
Integra-D Dicer**
U.S.D.A. Dairy
Division Accepted
High Performance
Cheese Dicing



**TranSlicer®
2520 Cutter in
standard and
short models**
Next Generation
Sanitation -
Fresh Cut Salad
Industry

URSCHEL CUTS YOUR WORKLOAD DOWN TO SIZE with 5 New Dynamic Models

As The Global Leader in Food Cutting, Urschel is constantly exploring and improving on cutting methods. Depend on Urschel to overcome challenges to exceed your production goals.

**Contact Urschel to discover the many
benefits of these new machine models.**



**DiversaCut 2110A®
Dicer with Conveyor**
Batch Processing &
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Set-up a free test-cut of your product:
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www.urschel.com



THE GLOBAL LEADER IN FOOD CUTTING TECHNOLOGY®

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provider of industrial cutting
machinery throughout the world.

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The Processing Zone SHOWCASE



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NORTH HALL, BOOTH #22013



URSCHEL

1200 Cutting Edge Drive, Chesterton, Indiana 46304 U.S.A.

Phone: 844/877-2435 • Email: nfo@urschel.com

www.urschel.com

As the Global Leader in Food Cutting Technology, Urschel remains the market leader in industrial food processing plants throughout the U.S., Europe, and all countries where food is commercially processed.

Headquartered in Chesterton, Indiana, one hour outside of Chicago, Urschel designs, manufactures, and sells industrial grade precision cutting machinery. Leading processors around the world in food and allied industries depend on Urschel to deliver targeted, capable cutting solutions.

Urschel recently released five new dynamic models:

New to the Affinity® line, the U.S.D.A., Dairy Division accepted **Affinity Integra-D Cheese Dicer** and the **Affinity CD-L Dicer**, focusing on dried fruits/bakery products and offering higher capacities compared to the CD-A and L-A dicers. New to the DiversaCut® line, the **DiversaCut 2110A® with Conveyor Dicer** provides batch and controlled discharge of product. The new **TranSlicer® 2520 Cutter** is available in two models – standard or short length – this new slicer builds on the TranSlicer name and offers a newer design that greatly reduces cleaning and washdown times. View the Urschel website to learn more.

Free-of-charge test cutting services are available to assist with R&D, learn more about an existing Urschel machine, or help evaluate a capital equipment purchase. Customers may witness test cutting of their product in-person, via video, or live remotely. Contact Urschel for more information.

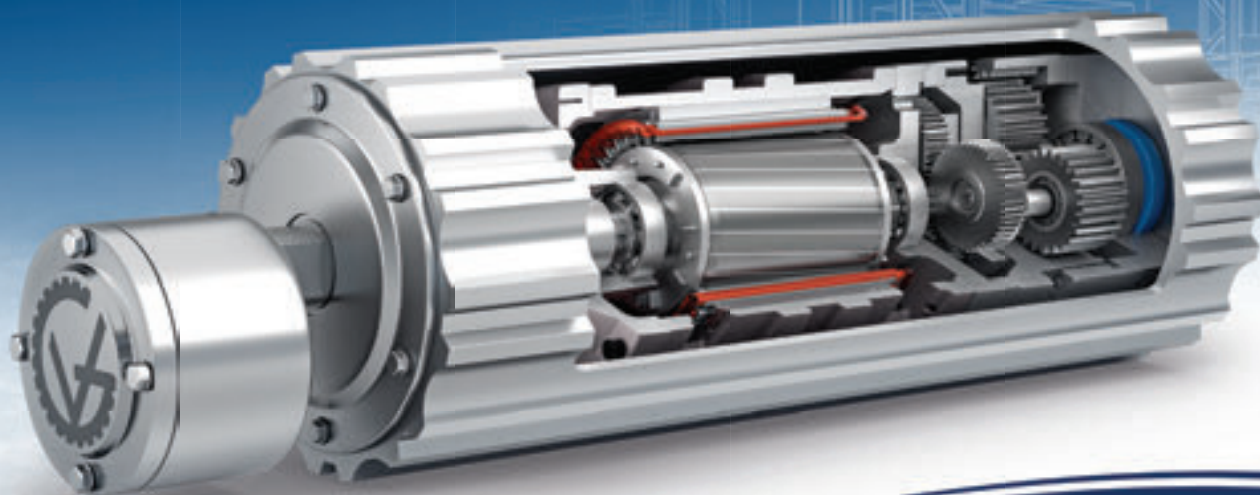


Reliable. Efficient. Low-Profile. Conveyor Drive Solutions



Visit us at
Booth S-7462

The VDG Drum Motor is a robust conveyor drive with all drive components enclosed inside the drum and designed for 80,000 hours of service life before maintenance, reducing energy and maintenance costs, and increasing run-time.



The all-316 stainless steel SSV Drum Motor, with belt profile machined directly onto the drum, drives modular conveyor belts without requiring sprockets, increasing hygiene and eliminating foreign material contamination.

The sprocketless SSV Drum Motor is the most sanitary conveyor drive, requiring 50% less time and water for washdown cleaning process.



Drum profile available for a variety of belt manufacturers, including Gates®, Habasit®, Intralox®, Volta®, Wire Belt®, and Cambridge®.



(888) 326-1476 • info@vandergraaf.com • vandergraaf.com/PEF





SEE US AT PACK EXPO LAS VEGAS
SOUTH UPPER HALL, BOOTH #7462



VDG (Van der Graaf)

13771 Cavaliere Drive, Shelby Township Michigan 48315 • USA

Phone: (888) 326-1476 • Email: info@vandergraaf.com

www.vandergraaf.com

VDG is the market leader in design and manufacture of drum motors for belt conveyors. VDG provides reliable customized solutions to food processing industries through innovation, precision manufacturing, research and development, for over 35 years.

The VDG Drum Motor encloses all drive components, including the motor, gear reducer, and bearings inside the drum, increasing mechanical and electrical efficiency, optimizing space, and promoting operator safety. All components are designed for 80,000 hours of service life before scheduled maintenance, eliminates regular adjustments and maintenance intervals associated with traditional external conveyor drives.

VDG's strong focus on sanitary designs have placed the all-316 stainless steel SSV Drum Motor at the forefront of food handling conveyors where sanitation is paramount. The continuous profile SSV Drum Motor has the belt profile machined directly onto the drum, drives modular conveyor belts without requiring sprockets. This sprocketless SSV Drum Motor features IP69K sealing system, withstands washdown pressure up to 3,000 psi and exceeds industry sanitary and safety standards.

The sprocketless SSV Drum Motor eliminates areas where food by-product become trapped and harbor bacteria, requires 50% less time and water to perform washdown cleaning, reducing operating expenses and increasing run-time. SSV Drum Motors are available in wide range of diameter sizes, belt speeds, horsepower, lagging options, and drum profiles.

The IntelliDrive™ Drum Motor with new permanent magnet motor technology delivers 40% increased electrical efficiency with much wider belt speed bandwidth, without loss of torque compared to a standard induction motor. With all drive components housed internally, the IntelliDrive™ achieves a 96% mechanical efficiency, further decreasing energy consumption and cost.

VDG ensures product quality, fast delivery and after sales support with inhouse manufacturing, state-of-the-art production technology, service centers and global representation throughout the USA.





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PACK EXPO LAS VEGAS
SOUTH UPPER HALL
BOOTH #7237



VAC-U-MAX

69 William Street
Belleville, NJ 07109 • USA
Phone: 800/VAC-U-MAX
Email: info@vac-u-max.com
www.vac-u-max.com

VAC-U-MAX is a worldwide leader in the design and manufacture of bulk material handling systems that incorporate pneumatic, aero-mechanical and flexible screw conveying technologies.

Since 1954, VAC-U-MAX has automated packaging and processing applications, conveying powders, flakes, pastilles, pellets, flavorings, food product, and more from various sources including totes, bulk bags, bins, and drums, to various destinations including packaging machines and process equipment.

Product range includes bulk bag loading/unloading systems, mobile vacuum conveying systems, batch weighing systems, direct-charge blender loading, and bag dump stations with integrated dust collection, bag lifting, and empty bag compaction. All systems and UL control packages are manufactured in Belleville, NJ with customer test lab onsite. Product range also includes compressed air operated combustible dust vacuum cleaners, continuous-duty vacuum cleaners and central systems.

For more information or RFQ visit www.vac-u-max.com or call (800) VAC-U-MAX.

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Bag Dump Stations



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Industrial Vacuum Cleaners

Let us solve your bulk material handling and industrial vacuum cleaning challenges. Visit vac-u-max.com and fill out RFQ or call (800) VAC-U-MAX.

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Visit us at Pack Expo Las Vegas Sept 27-29 (Booth 7237)



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FLOORING SYSTEMS ALLOW COMPLETION OF EPOXY MORTAR INSTALLATIONS IN HALF THE TIME

Sikafloor PurCem Fast Set floor systems use unique chemistries to provide mortar, slurry, and/or coating options for any project environment. The rapid return-to-service systems dramatically reduce recoat and cure times, without affecting pot life and product workability. Enabling complete epoxy mortar installations in record time, the flooring systems also offer fast and easy ways to repair failed floor areas, create slopes for positive draining, and maintain sterile conditions throughout production areas.

Sika Industrial Flooring
sikafloorusa.com

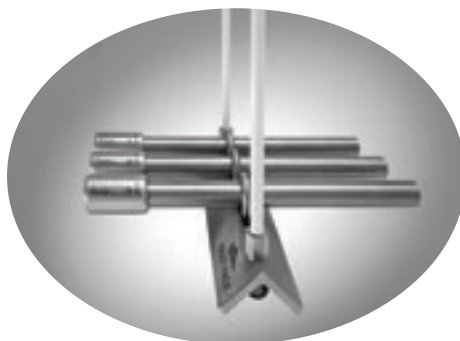
➤ See us at Booth N-8917

SANITARY SUPPORT SYSTEM IS PRE-ENGINEERED AND FACTORY FABRICATED

The **Rocket Rack sanitary support system** is intended for process pipe, electrical conduit, and other mechanical installations. It is specially designed for food, beverage, and pharmaceutical facilities—any environment where sanitary installation is required. The support racks are engineered to withstand heavy loads. The patented slot design allows lines to be added quickly and easily, without cutting or welding, and permits fine adjustments, assuring a straight pipe or conduit run. Sleek lines, radius corners, and a buffed finish create an aesthetically pleasing installation, while meeting the sanitary requirements of the most stringent applications.

Rocket Rack, a Unit of Robroy Industries
rocket-rack.com

➤ See us at Booth SU-7122



MONITORING SYSTEM TAKES THE GUESSWORK OUT OF WHEN EQUIPMENT WILL FAIL

Featuring the industry's first patented bottom-bearing wear sensor, the **Ashworth SmartSpiral monitoring system** allows access to multiple machines at multiple plant locations from a phone or tablet to continuously monitor temperature, belt tension, and cage power. Live data is collected and transferred via a proprietary application to a cellphone, tablet, laptop, or desktop computer—without having to use an intranet system. The monitoring system helps prioritize maintenance costs, identify performance issues, prevent failures, and reduce repair costs to improve performance and efficiencies.

Ashworth Bros. | ashworth.com

➤ See us at Booth N-23004

PACKER FEATURES CUSTOM-DESIGNED SIMPLICITY, FLEXIBILITY, AND USER-FRIENDLINESS

Available as a tray or wraparound packer, the **Somic ReadyPack** machine collates, cartons, and closes at output rates up to 160 products/min, with a cartoning capacity up to 18 units/min as a tray packer and 12 per min for a wrap-around unit. The fully automated packer has a space-saving small footprint, requiring just 70 sq ft of floor space. Built for retail-ready packaging applications, it accommodates a range of items, such as stand-up pouches, flowpacks, and rigid bottles.

Somic America | somic.us

➤ See us at Booth SL-6460



PUMP IS DESIGNED FOR LARGE SUSPENDED SOLIDS TRANSFER, HIGH-VISCOSITY APPLICATIONS

The **Axiflow Axi-Auger sanitary twin screw pump** is suitable for any large suspended solids transfer, high-viscosity applications. It incorporates a large hopper and augers that extend to the twin feed screws. The design allows for the feed screws to be stuffed by the augers, which makes mixing and product transfer more linear and consistent.

Axiflow Technologies

axiflowtechnologies.com

➤ See us at Booth N-20013



SOFTWARE-AS-A-SERVICE MAKES CLEANING EASIER AND MORE PRODUCTIVE

The **Sani-Matic SaniTrend cloud online data acquisition and management system**, a software-as-a-service, is available with any new PLC-controlled, automated cleaning system from Sani-Matic. It can also be retrofitted with any existing Sani-Matic automated cleaning system that has an Allen-Bradley CompactLogix or higher PLC processor. The software-as-a-service provides automated, secure data acquisition and reporting of critical cleaning cycle information for any automated cleaning system. Additional features, such as live-view dashboards, OEE trends, analog value and event history, documentation access, and alerts, provide additional information and actionable insights into cleaning system operation.

Sani-Matic | sanimatic.com

➤ See us at Booth N-23012



FLOW SENSOR HELPS PREVENT WASTED ENERGY AND PREMATURE WEARING OF EQUIPMENT

The **Emerson AVENTICS Series AF2 flow sensor** monitors air consumption in pneumatic systems, enabling actionable insight around air consumption and leakage. The leakage rate can be monitored by looking at the used air volume, so leaks can be diagnosed and addressed before they become major issues. By giving end users actionable insights on machine data, such as flow, pressure, and temperature, the sensor helps optimize energy consumption, prevent machine downtime, and reduce costs. Highly flexible, the sensor can be directly interpreted by many controllers and offers multiple communications options.

Emerson | emerson.com

➤ See us at Booth SL-6307

SPIRAL IMMERSION SYSTEM PRODUCES BETTER-QUALITY, SAFER FOOD PRODUCTS

The **FPS Food Process Solutions spiral immersion system (SIS)** can be used to chill, freeze, pasteurize, and sous vide cook food products. Consisting of a spiral conveyor in a tank of liquid, usually water or brine, the system offers continuous immersion processing in temperatures ranging from -40 °C to 90 °C. Utilizing the efficiency of liquid vs. air, the system transfers heat 25 times faster and is more flexible compared to chilling or freezing in air. Sous vide cooking produces food that is consistent in flavor and quality, has a long shelf life, and can be reheated in the bag.

FPS Food Process Solutions | fpscorp.ca

➤ See us at Booth SU-8327

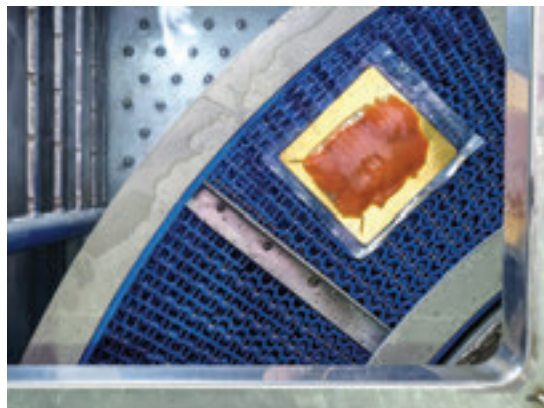
CUBER INCREASES CAPACITY AND EASE OF USE

The **Deville two-way cuber** reduces 40-lb cheese blocks into size-specific cubes to feed dicers, centrifugal shredders, and other equipment. Constructed with 304 stainless steel and FDA-approved plastics, the cuber consists of pneumatic cylinders, hinged covers, Allen-Bradley SensaGuard safety switches, fixed catch pans, and adjustable casters. Features, such as wired or bladed harps, as well as integration with a full line, are optional. The cuber can process up to 15,000 lb/hr, including full blocks and trims.

Deville Technologies

devilletechnologies.com

➤ See us at Booth N-26008





MIXING SYSTEMS REDUCE LABOR, CUT COSTS, IMPROVE CONSISTENCY, SIMPLIFY MIXING PROCESSES

Reading Bakery Systems (RBS), a world-leading manufacturer of bakery and snack equipment, provides innovative process solutions for the food industry. The RBS brands—Thomas L. Green, Reading Pretzel, Exact Mixing, and Reading Thermal—offer production lines that produce a range of snack products, innovative continuous mixing solutions and oven profiling, and consulting services. At PACK EXPO 2021, RBS will feature Exact continuous mixing systems and baked snack/petfood technology. Exact continuous mixing systems reduce labor, cut costs, improve consistency, and simplify mixing processes. RBS flexible snack systems produce pretzels, bread snacks, crackers, baked crisps, cookies, biscuits, pet treats, and more.

Reading Bakery Systems

readingbakery.com

➤ See us at Booth SU-7404



SIDE DRIVE SPIRAL SOLUTIONS DELIVER THE ULTIMATE FLEXIBILITY, SUPERIOR HYGIENE

Fully washdown-capable, **CMP side drive spiral solutions** are suitable for direct food contact. Intralox side drive technology eliminates the need for a central drum and transfers between equipment, substantially reducing product damage and loss. The innovative side drive design allows for flexible solutions, such as oval spirals, up/down spirals sharing the same footprint, and long conveyor paths. CMP, along with its parent company FPS Food Process Solutions, can now provide clients the world's most hygienic end-to-end freezing and cooling solutions.

CMP | cmpequipment.com

➤ See us at Booth SU-8327



DRUM MOTOR HAS PERMANENT MAGNET ELECTRIC MOTOR TECHNOLOGY

Built for reliability, efficiency, and longevity, the **VDG IntelliDrive drum motor** features variable belt speed without torque reduction and a permanent magnet electric motor that is enclosed inside the drum, along with the gear reducer and gears. The drum motor has a service life of 80,000 hr before scheduled maintenance. For sanitary food belt conveyor applications, the all-316-stainless-steel motor is available with the belt profile machined onto the drum that drives the modular belts without the use of sprockets.

VDG (Van der Graaf) | vandergraaf.com

➤ See us at Booth SU-7462



COLOR SORTER INCLUDES A WIDE RANGE OF TECHNOLOGIES

The **Anysort cloud series color sorter** applies global initiative hawkkey infrared technology, global initiative cloud image capture, analysis processing technology, global initiative Internet of Things (IoT) technology, global initiative real one-button cloud intelligent operation, and more—over 10 kinds of new high technology. The Anysort Optoelectronic is a third-generation color sorter.

Anysort USA | anysort-usa.com

➤ See us at Booth N-26005



CUTTER COMBINES PRECISION SLICING WITH MAXIMUM VERSATILITY

The **Urschel E Translicer (ETRS) cutter** features a built-in discharge conveyor, which facilitates the dispensing of cut product into totes. The built-in conveyor also assists with the effective capture of slivered, small cuts of leeks, onions, or peppers to promote complete discharge from the machine. Hinged/sliding panels offer full access to all key areas of the machine to simplify maintenance and washdowns, while sloped surfaces throughout the machine, including a self-draining frame, make cleaning easier. Engineered for elongated food products, the belt-fed unit employs different styles of 20-in. diameter cutting wheels to create flat or crinkle slices and julienne cuts.

Urschel Laboratories

urschel.com

➤ See us at Booth N-22013

POWDER MIXER IMPROVES PRODUCT TEXTURE AND REDUCES PROCESSING TIME

The **Fristam PM-FDS powder mixer** allows processors to mix highly concentrated, viscous, wet or dry ingredients into a fluid stream. The tabletop unit includes a Fristam shear blender that devours lumps and clumps and provides consistent blending, while the suction of a Fristam twin screw pump mixes products with viscosities as high as 1,000,000 cps. The powder mixer maintains consistent suction on products whose viscosities start at a lower level but climb past the point where traditional pumps fail.

Fristam Pumps USA | fristam.com
➤ See us at Booth N-23000



UNIQUE DESIGN-BUILD APPROACH IS A 4-PHASE ANALYTICAL METHODOLOGY

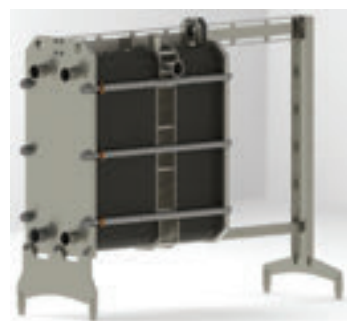
Engage early utilizing **HRI's progressive design-build contracting approach**. Minimal capital investments provide initial scope development, drawings, and schedules necessary for preliminary project approvals. Our content experts provide customized development and execution plans to optimize business needs and requirements. Strategic information generated through this proven methodology allows owners to evaluate risk and the funding commitments required to further deliver a successful project.

Hansen-Rice | hansen-rice.com
➤ See us at Booth N-20008

ZERO OBSTRUCTION BOLTING INCREASES WORKER SAFETY

Thermaline Z Bolt zero obstruction bolting eliminates the hazards of long horizontal rods protruding into workspaces. It utilizes a precision-machined non-galling extended receiver to encapsulate the tie bolt. The receiver and tie bolt are matched to allow for full stroke length and are slotted for easy removal. The receiver has an internal seal around the tie bolt to keep the cavity moisture-free. The Z-Bolt option is available on most sizes of Thermaline plate heat exchanger frames, for both sanitary and non-sanitary applications.

Thermaline | thermaline.com
➤ See us at Booth SU-8153



VIBRATORY CONVEYOR MAXIMIZES SANITATION WHILE IMPROVING OPERATOR ACCESS

Available in lengths from 30 to 50 ft and 20- to 40-in. widths, the **Key Marathon vibratory conveyor with monobeam construction** uses natural-frequency vibratory motion to distribute bulk foods long distances at speeds greater than 50 ft/min. The sloped frame and spring arms are positioned underneath the bed, enabling workers to get closer to the stainless-steel bed, which can be tilted to draw product to one side; flow direction can be controlled with optional side outlet diverters. The conveyor can be used for a range of bulk food applications, from raw receiving to packaging, and comes in four finishing standards.

Key Technology | key.net
➤ See us at Booth C-4225

HPP MACHINES ARE DESIGNED FOR LARGE JUICE PRODUCTION

Hiperbaric HPP In-bulk machines allow beverages to be processed in bulk format prior to bottling. The technology allows the use of any container, regardless of material, design, or size. Once liquids are filled into the inlet tank, the HPP beverage empties into the outlet tank through sterilized tubes ready to be bottled in an ultra-clean filling line. The bag, which can be made of different plastics, including bioplastics, stands in place during the full production, withstanding over 100 HPP cycles, representing a production of about 50,000 L. The equipment design provides a filling efficiency of 90% of total volume.

Hiperbaric | hiperbaric.com
➤ See us at Booth SL-6271



MIXER PRODUCES DOUGH IN A FAST, DUST-FREE MANNER

Working according to an innovative wetting principle as a pre-mixer, the **Zeppelin DymoMix high-speed mixer** has a nozzle in the rotating shaft that builds up a fine, continuous liquid screen. Powdery components are wetted with water or oil when passing through the liquid screen, immediately generating fully hydrated, homogenous dough. Able to process very firm to almost liquid doughs, the mixer can be incorporated on batch or continuous mixers, or used as a standalone system. Typical applications include noodle, bread, and roll doughs, as well as doughs for pastries.

Zeppelin Systems USA

zeppelin-systems.us

➤ See us at Booth N-28006



ROTARY LOBE PUMP OFFERS GENTLE PRODUCT HANDLING AND LOW PULSATION PUMPING

Compact and with a dead space-free design, the **Netzsch T.Sano rotary lobe pump** has an oil-free belt drive and a rotor mounting outside the pump chamber. 3-A Standard and EHEDG-certified compliant, the pump has CIP capability, so it can be cleaned without prior dismantling. It also features the FSIP (full service-in-place) concept. The entire front can be opened for quick and easy access to the pump chamber right up to the flange connection.

Netzsch Pumps North America

netzsch.com

➤ See us at Booth N-19000

TANKS AND VESSELS ARE SUITABLE FOR A VARIETY OF FOOD AND BEVERAGE PRODUCTS

Used to process food, wine, beer, and other beverages, **Spokane Industries stainless-steel tanks and vessels** are custom engineered and built to exact specifications. Spokane Industries is certified to manufacture ASME pressure vessels; ASME U, U/M, and H stamped vessels; and UL 142 explosion-resistant tanks. All the equipment is manufactured to rigorous sanitary standards. An automated spot welder ensures consistent, reliable jacket welds.

Spokane Industries

spokaneindustries.com

➤ See us at Booth SL-5864



ROBOTIC, VISION-GUIDED SOLUTION STREAMLINES THE TRADITIONAL CARTONING PROCESS

Through a combination of proprietary technologies, the compact **JLS Peregrine robotic cartoning solution** achieves full carton control at high speeds, without turns or conveyors. Once the solution loads a carton, a high-speed carton management system moves down the line, where a vision-guided robot simultaneously closes the top-load carton, picks it up, and places it on a discharge conveyor where it is sent downstream. Unlike other cartoning systems, the solution eliminates the need for carton plows, tucker wheels, and additional conveyors.

JLS Automation | jlsaautomation.com

➤ See us at Booth SL-6128



DEPOSITOR OPTIMIZES PRODUCTION SYSTEMS, INGREDIENTS HANDLING

Suitable for working over vacuum form, fill, and tray sealing lines, the **Unifiller M3 depositor** is compatible with triple-lane production systems. Used for the clean depositing of relatively viscous-to-liquid products, with or without chunks, the depositor features adjustable nozzles, each of which provides individual portioning. The depositor can be used as a standalone unit or integrated into a production line for applications, including batters, fruit fillings, sauces, mousse fillings, salad dressings, soups, and deli salads. It is available in a servo version, consisting of a programmable logic controller (PLC)-controlled machine capable of multiple deposits, recipe storage, and conveyor integration.

Unifiller Systems | unifiller.com

➤ See us at Booth SL-6471



EXPLOSION-PROOF VACUUM CONVEYOR SYSTEM TRANSFERS PRODUCTS SAFELY AND GENTLY

ATEX certified, the **Volkman VS Series pneumatic vacuum conveying system** is approved for use in hazardous



environments, including potentially explosive atmospheres with combustible dust. The automated, enclosed system operates

without electric power and has no rotating parts, preventing heat generation, minimizing static buildup, and eliminating the potential for ignition. The system transfers powders, granules, small components, and other dry bulk materials from silos, tanks, sacks, and bulk bags into the process without affecting particle size or shape. Its sealed, dust-tight design protects the conveyed material from contamination, while maintaining a clean, hygienic work environment.

Volkman USA | volkmanusa.com

➤ See us at Booth C-5511



ADVANCED SYNTHETIC SUGAR-DISSOLVING OIL IS NSF H1 REGISTERED

Lubriplate SYN-FG-SDO oil is designed to lubricate machine components exposed to sugar contamination, while removing and preventing sugar deposits. Ideal for machinery found in the confectionery, baking, and beverage industries, the synthetic oil can be used for the removal of sugar, syrup, caramel, and fondant residues on metal surfaces and lubricated machine components, including chains, slides, bearings, cams, tracks, ways, pneumatic cylinders, open gears, slicer blades, and other components on food packaging and processing machinery.

Lubriplate Lubricants | lubriplate.com

➤ See us at Booth SU-8073

AIRLOCK IS USDA DAIRY ACCEPTED FOR HYGIENIC APPLICATIONS

The **Schenck Process global hygienic airlock** (GHA) is engineered for applications where dry raw or finished products are handled in the process and where inspection or system clean out is required. The USDA Dairy-accepted, dismountable airlock has a rail system that simplifies its removal and provides access to the internal valve, cavity, rotor pockets, and all other product contact areas for quick and easy cleaning. A valve interference detection system protects the airlock from damage and prevents product contamination due to interference between the valve rotor and housing.



Schenck Process

schenckprocess.com

➤ See us at Booth N-24012

DOOR ADDS FLEXIBILITY TO PALLETIZED PRODUCT BLAST FREEZING SYSTEM

The **Tippmann Group Pallet Fit door** makes the company's QFR Zone blast freezing system more flexible and efficient than ever before. The door allows pallets of all sizes, whether they're full pallets, partial pallets, or single-layer pallets, as well as food products with no pallet, to be placed in the QFR Zone system, eliminating the need for plug pallets. As pallets are placed into the system, the door engages only where there is product, opening and allowing maximum airflow through the product while eliminating wasted airflow. The door also is available with the QTR Zone solution for thawing palletized product.



Tippmann Group | tippmanngroup.com

➤ See us at Booth SU-8368

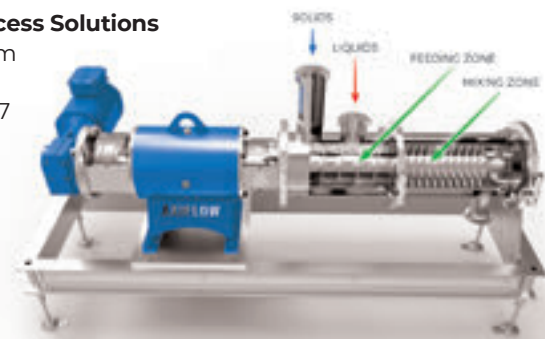
SOLID LIQUID MIXER MAINTAINS PRODUCT INTEGRITY

The **Infini-Mix Type DLM/FS in-line solid liquid mixer** gently blends multiple solid and liquid ingredient streams. Each ingredient stream is metered into the mixing chamber at the appropriate ratio to ensure single-pass accuracy. The combination of the feeding and mixing chambers produces a consistent, highly repeatable finished product with little to no product damage or loss of integrity. The mixer is ideal for late-stage differentiation applications where a final ingredient (or set of ingredients), such as delicate inclusions, fragrances, or coloring, can be added to the primary liquid at the end of the process or at the filler.

Infini-Mix Process Solutions

wemixstuff.com

➤ See us at Booth N-23007





SPIRAL AND TUNNEL FREEZERS FEATURE UNIQUE CLEANING SYSTEMS

Advanced Equipment custom freezers are built to match or exceed original engineering expectations. Individual requests are transformed into accurate CAD and 3D modeling drawings and, later, working prototypes. The freezers are designed for simplicity in operation and maintenance; efficiency in energy use and green materials; cleanability in accordance with food safety standards and standard sanitization practices; safety; and durability. All the spiral and tunnel freezers are built to meet USDA, FDA, UL, CFIA, OSHA, and CSA specifications and standards, and offer a unique cleaning system that monitors and controls water temperature, flow, and pressure throughout the cleaning cycle.

Advanced Equipment

advancedfreezer.com

➤ See us at Booth SU-8453

DIGITAL MONITOR ENCLOSURE IS WASHDOWN SAFE

The **Protective Enclosures Display Shield digital monitor enclosure** provides manufacturing facilities TV and display protection. The front panel of the display cabinet is 0.220-in. thick, ultra-clear Lexan polycarbonate for better direct viewing of the display and screen defense. The enclosure has a semi-permanently affixed front shield that is designed to stay closed at all times but does give the ability to remove and/or upgrade or replace the front panel. It offers protection from water and other liquids, certain chemicals, dust, debris, tampering, theft, and more.

Protective Enclosures

protectiveenclosures.com

➤ See us at Booth N-18006



BAR FORMING EQUIPMENT DELIVERS PRESSURE-LESS, PRECISE FORMATION OF SLABS

Offering simple changeover for alternate product runs, **Sollich Miniconbar bar forming equipment** covers the many stages of bar forming, from slab forming through final cutting to the desired shape. A universal line that can make all bars, including protein bars, cereal bars, candy bars, multi-layered bars, fruit bars, and more, the equipment has a slab width of approximately 16 in. and goes to approximately 24 in. after spreading. Suitable for a variety of product ingredients, the system makes over 750 bars/min.



Sollich North America

sollichna.com

➤ See us at Booth SU-7204

SYSTEM CAN BE COMBINED WITH HRS FRUIT JUICE PROCESSING MACHINERY FOR PASTEURIZATION, FILLING

The **HRS Heat Exchangers I Series system** de-packs, crushes, and melts (re-melts) frozen fruit juice for the manufacture of high-quality not-from-concentrate products. It handles up to 60 drums (3,170 gal) of frozen product per hr. The IC Series element features a roller conveyor, which feeds lined 200-L drums into a tipper that empties them into a crusher. Here, a spiked roller crushes the solid ice into an icy slush, which is transferred to the IM Series re-melting device that melts the frozen product, raising the temperature of the juice from frozen to approximately 39 °F in 90 seconds.

HRS Heat Exchangers | hrs-heatexchangers.com

➤ See us at Booth N-20002



HORIZONTAL PROCESSING TANK HEATS OR COOLS PRODUCTS MORE QUICKLY AND UNIFORMLY

An innovative solution for cooking and cooling heat-sensitive products, the **DCI Varo horizontal processing tank (HPT)** is designed for food preparations, baby

food, bakery filling and dessert toppings, and vegetable foods. The coil agitator contains the heating/cooling element, allowing more contact with product to heat or cool more quickly and uniformly, while being gently mixed to keep the shape and structure of the product intact. The tank significantly reduces processing time compared to processing tanks with a standard agitator.

DCI | dciinc.com

➤ See us at Booth SU-7801

WE ARE DESIGNERS AND
BUILDERS OF

SUSTAINABLE FOOD PRODUCTION FACILITIES

THAT FEED THE WORLD
TODAY AND TOMORROW

PLAN

Planning for growth requires insight into the future. Our consulting services provide a roadmap for site selection, process improvement planning, facility renovation, expansion, and new construction concepts.

DESIGN

Creating a food facility that is functional today and adaptable to the future requires foresight. Our design services generate process designs, engineering and architectural concepts, plans and specifications for building a food facility that will stand the test of time.

BUILD

Building a food plant requires construction techniques that yield an environment safe for food today as well as for tomorrow. Our construction services utilize professional management oversight to transform sanitary designs into a hygienic facility.



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A SINGLE-SOURCE APPROACH TO FRESH SOLUTIONS

Since our inception 30 years ago, ESI Group has been supporting companies that safely feed the world. We want to improve the way you work today and meet the demands of tomorrow. Our experienced staff of over 70 professionals have completed 425+ projects for industry leaders like The Bama Companies, Ben E. Keith Foods, Cargill, Kerry, Land O’Frost, Sysco and US Foods. When you make the decision to take your business to the next level and need advice on the design and construction of your food facility, ESI Group USA can deliver the expertise to get you there.



DESIGN SERVICES

ESI’s design services can be performed independently, or combined for a single-source, design-build approach.

CONSTRUCTION

ESI’s construction division practices combined responsibility for design, budgeting, and construction into one firm.

SUSTAINABILITY

ESI pursues new technology and techniques to improve building performance in a cost efficient and sustainable way.



THE AUSTIN COMPANY

BOOTH SU-7946

Consult • Design • Engineer • Construct

www.theaustin.com

For over 140 years, companies across the globe have turned to Austin for site selection, design, engineering, construction, and facility maintenance. Whether you are looking to build new, expand existing, or automate production, we have the depth of knowledge to help you make all the right moves.

The Austin Company



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BOOTH SU-7315

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ESI GROUP USA



PLAN | DESIGN | BUILD

BOOTH N-26001

Your Source for Food Plant Design and Construction

www.foodplantengineering.com

We are designers and builders of sustainable food production facilities. Using imagination, innovation, and ingenuity, we help food manufacturing companies improve food safety, gain productivity, and grow capacity.

Food Plant Engineering



Kaeser Compressors can help food

and beverage manufacturers of all sizes increase uptime, save in operating expenses, and lower life-cycle costs.

Compressed air and vacuum are vital in nearly all aspects of food and beverage manufacturing. Steady pressure and clean, dry air are critical for all sorts of machinery including primary processing equipment, mechanical conveyors, packaging equipment, printing and labelling, palletizers and de-palletizers, and air-driven hand tools. Vacuum is often used in packaging and low pressure air in pneumatic conveying and wastewater treatment. Plant operators need to keep these lines working smoothly and efficiently, often with the additional challenge of meeting strict food safety standards.

Yet, despite their importance, air systems are often poorly managed. Oversizing and lack of controls waste power. Inconsistent pressure and flow reduce productivity with scrap and downtime. And between leaks, improper uses, and artificial demand, nearly half the air produced is wasted.

Kaeser understands these challenges and has helped countless food and beverage manufacturers improve existing air systems to increase product quality and minimize downtime. Our team of experts can design the most energy-efficient, reliable, low maintenance system for your application. If you're tired of downtime, frequent maintenance, and rising energy costs, visit us online at us.kaeser.com/pfw.



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BOOTH N-19002

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Gleeson Constructors & Engineers, L.L.C.



BOOTH N-20008

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<https://www.hansen-rice.com>

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Hansen-Rice, Inc.



BOOTH SU-7636

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www.kiewit.com

Kiewit is one of North America's largest and most respected engineering and construction organizations. Whether your food and beverage project is a traditional bid-build, design-build or requires early contractor involvement to influence design, delivering safe and high-quality projects is the foundation of Kiewit's business and success. Kiewit had 2020 revenues of \$12.5 billion and employs 27,000 staff and craft employees.

Kiewit



BOOTH SU-7839

Your Global Powerhouse in Food Processing

www.stellar.net

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Stellar



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SECTION 1

Design/Build & Engineering Services



BOOTH SU-7627

Design/Build for Cold Storage and Food Processing

www.tippmanngroup.com

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Tippmann Group



BOOTH C-5606

Creating Food-Safe Environments

www.webbersmith.com

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The WEBBER/SMITH Group



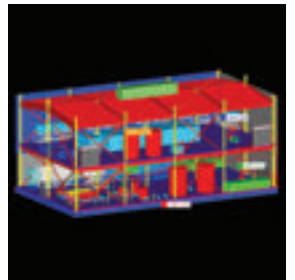
BOOTH SU-7719

Delivering High-Quality Engineering and Design Services

www.zachrygroup.com/foodandbeverage

Zachry Engineering provides a full range of high-quality engineering and design services from small revamp projects to large grassroot plants for the food and beverage industry in a safe, efficient, and cost-effective manner resulting in successful projects for our clients.

Zachry Engineering Corporation



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SECTION 2

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Sikafloor PurCem Fast Set



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Kaeser Compressors, Inc.



BOOTH N-25023

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www.miuraboiler.com

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MIURA



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- Pet Food
- Ingredients
- Beverage

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- Food Service Distribution
- Convenience Store Distribution
- Public Cold Storage

Other

- Pharmaceutical
- General Industrial

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- Facility Planning
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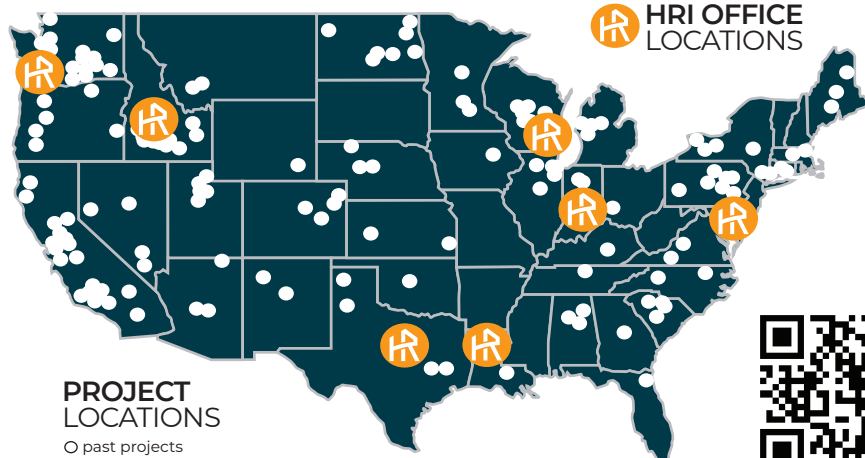
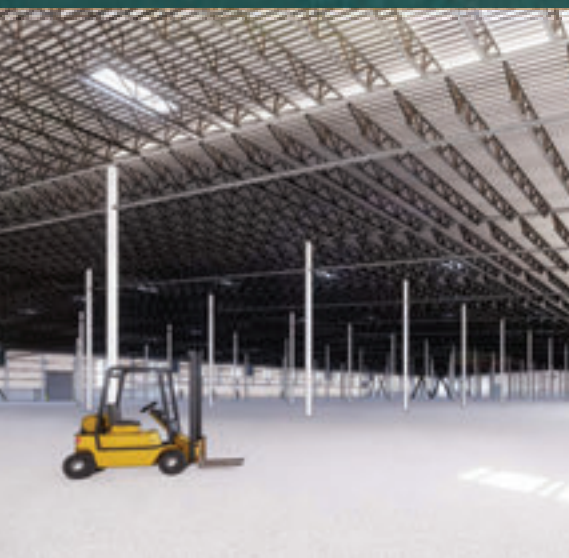
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