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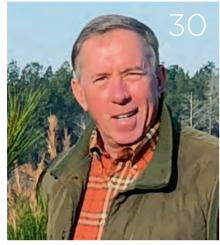
The Bi-Monthly Publication

for American and Canadian Integrated and Independent Box Makers

May/June 2021 | Volume 17 No 3

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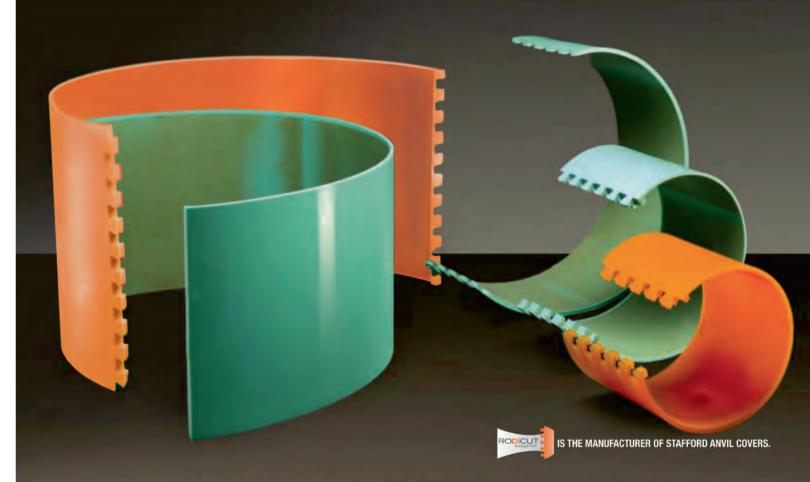
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Corrugated

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editor's comment





LOSING A MENTOR

have been fortunate to have had several mentors throughout my career. The first was the editor of a daily newspaper in Cleveland, Ohio. I was a young reporter just out of college who had a lot to learn about chasing down sources and not getting scooped by the competition. He provided valuable guidance. We still meet occasionally for lunch to catch up.

A more recent mentor was someone who I have had the pleasure of working with since joining Corrugated Today in 2005. Michael "Mike" Brunton was one of the founders of the magazine, which is jointly owned by Brunton Business Publications in England and NV Business Publishers Corp., publisher of Board Converting News, Technically, I work for both companies, however, Mike presided over my editorial responsibilities. Sadly, he passed away in March. He was 73 years old and still actively involved in the magazine, proofing pages up until the night before he died of a massive stroke.

There is a good chance you may have never met him, but his imprint on the industry is indelible. As his son Daniel became more involved in the business, Mike cut back on his travel, happy to stay closer to home and oversee the publishing company he had built. International Paper Board Industry, Folding Carton Industry and Recovered Fibre News, along with the Packaging Portal web site and ConneXion virtual expo, are all leading sources of information for the board converting industry. It is no wonder. Mike had a keen awareness of what topics people were interested in, gleaned from his more than 50 years covering the industry. His knowledge was extensive and influential. People

There are some days when I forget and wonder if he will call to chat. Mike's community lost a dear friend, the corrugated industry lost an icon and I lost a mentor.

wanted to know what he thought. The praise from industry veterans in his obituary on the next page, written so eloquently by Dan is not hyperbole. As one industry supplier told me recently, "He was always the smartest person in the room."

Launching A Magazine

It was at SuperCorrExpo 2004 where Mike and Dan, along with Ted Vilardi and his son Tom, finalized their decision to start a new bi-monthly publication for the U.S. and Canadian markets and asked me to be the editor. Launching a trade publication is a risky proposition that can go belly up very quickly. Corrugated Today's success lies in the behind the scenes direction from Mike.

When we began working together, I have to admit to being intimidated by his knowledge and stature in the industry, but that anxiety was short lived as we became immersed in the task of publishing a new magazine. Mike challenged me to learn everything I could about the subject of corrugated and he inspired me to find innovative story angles, particularly related to the process of making a box. New technology fascinated him and is one of the hallmarks

of all the Brunton publications.

One of my first assignments was high board line diecutters.

After sending the article to him, I remember holding my breath awaiting his assessment. A compliment from Mike meant something, and when he did have a criticism it was constructive. When we disagreed, he always considered my perspective. In fact, he encouraged the debate.

We worked out of offices separated by 3.700 miles and an ocean, but that never mattered because our viewpoints and work ethic were in sync. Over the years we established a routine with Mike managing with a light hand, offering editorial guidance when he felt compelled. During the COVID-19 lockdowns he liked to telephone and have "a good chinwag." It was clear he was frustrated with having to spend so much time at home. His wife Fiona, who I am equally fond of, told me that he worked tirelessly for their local community and COVID put that on pause.

The suddenness of his death still unsettles me. There are some days when I forget and wonder if he will call to chat. Mike's community lost a dear friend, the corrugated industry lost an icon and I lost a mentor.

Feel free to contact me with story ideas, comments or suggestions.

I can be reached at 440-356-2257 or e-mail jschultz@corrugatedtoday.com

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MICHAEL DAVID BRUNTON

IT IS WITH THE DEEPEST REGRET THAT WE INFORM OF THE DEATH OF MICHAEL BRUNTON, CO-FOUNDER OF CORRUGATED TODAY MAGAZINE. HE PASSED AWAY IN MARCH. HE WAS 73 YEARS OLD.

BY DANIEL BRUNTON





ichael was born in Farnham, Surrey, England on March 21, 1947. Being born into a military family, his global 'travels' began from an early age. He accompanied the family to Ankara, Turkey, at the age of five, where his father had accepted a military advisor's role for two years. By the age of seven he was fluent in Turkish. The next move came as Michael was about to turn eight, when his father was posted to Osnabrück in Germany.

Army life was in his blood. In 1968, Michael was Commissioned at the Royal Military Academy Sandhurst as an Officer into The 3rd Carabiniers (Prince of Wales Dragoon Guards), following in the footsteps of his father. He had tours of duty in Cyprus, Libya, Germany and the UK, before leaving the army in 1971 at the time of the amalgamation of his regiment, The 3rd Carabiniers with the Royal Scots Greys.

Prior to concluding his Short Service Commission in the Army, Michael was introduced to Fiona Binsted by his sister Chrissie. Their romance was instant, with Michael proposing to Fiona on her 18th birthday and they were married a year later at Binsted church in September 1970.

Michael and Fiona welcomed their first son, Daniel, in 1973, followed in 1977 by Benjamin. They were married for 50 years, celebrating their Golden Anniversary in September 2020, but due to COVID lock-down, were unable to celebrate in a style befitting them both.

Publishing Career

Having left the Army in 1971, Michael was encouraged to join Fiona's family publishing business, Binsted Publications. He worked under Major Ken Binsted, learning the art of producing trade magazines in the wine and beverage industry, then cutting his teeth in the packaging industry by selling advertising in International Paper Board Industry. In 1977, Michael asked Major Binsted if he could launch a new title to cover the carton business, which they went on to call Folding Carton Industry. Michael worked successfully alongside Fiona's brother Ed and his wife Jan for many years, before setting up Brunton Publications in 1988.

Michael always loved visiting box plants and carton factories, talking to owners and managers and understanding how the industry ticked. He was never satisfied until

Michael on Tour with The 3rd Carabiniers in Libya in 1968.





Maj David and Margaret Brunton, Michael and Fiona, Muriel and Maj Ken Binsted. September 26, 1970.

he had asked every last question he could possibly think of. He was also keen to learn about new developments and the advent of flexo printing on corrugated board gave him the chance to tour the world, talking at conferences for FEFCO, TAPPI and AICC. Although he had never printed one single box in his life, audiences listened and took note! He was an eloquent speaker and was a firm favorite on the speaking circuit during the 1980s and 1990s, including at Congress events held by ECMA. The Torquay Corrugated Conferences, which ran for over 20 years, are still

talked about even to this day. Good content, great atmosphere, industry support... and awfully late nights at the bar.

He also broadened the reach of the business, when he formed a publishing alliance in North America in the late 1980s with *Board Converting News* founder Ted Vilardi. Michael formed a close bond with Ted and was delighted when Tom Vilardi joined his father in the business. They became an industry powerhouse in North America, forging strong and lifelong friendships with converters and suppliers alike.

Michael always loved visiting box plants and carton factories, talking to owners and managers and understanding how the industry ticked. He was never satisfied until he had asked every last question he could possibly think of.

"Mike personified everything in the industry he covered for so many years - professional, hardworking, fun loving, dynamic, innovative, and reliable.

MIKE D'ANGELO, AICC PRESIDENT

He developed the business to become a complete service provider, from written word, through design and repro, then into the printing factory. He applied principles he had seen in the packaging world to his own little publishing empire, growing the Brunton 'family' to 50 people in the heady days. He was never happier than watching people excel in their jobs, encouraging them to be the best they could be. He wasn't the boss; he was just part of a dynamic team. He was very much a man of the people and treated individuals on merit, not rank or title. He was just as happy making a cup of tea for the press-minders as being in negotiations in the board room.

He worked closely with Reed Exhibitions in launching the 'Corrugated' exhibitions, which ran successfully in 1994, 1998 and 2002. It was in 1994 that his eldest son, Daniel, joined the business. Together, they worked in partnership for the next 27 years, with Michael never actually retiring, reading his final page proof the night before he had the stroke.

Fond Memories

"While it may have been the "business" that brought us together it was the family we created afterwards that has lived on," said Jeneane Vilardi. Tom's widow. "I met Mike and Fiona at my wedding in 1988. You can pick them out of the 300+ people in the photos because they were the ONLY ones so properly attired. We watched their children grow up as we were having our own. And today we are more family than friends. The new

generations have made it their own mission to carry on. T.J. and his wife Cara have visited the Bruntons in England and our Tyler chose to study abroad at Westminster University. Too many funny memories to include, but a nude beach and rubber bands in Nice, France does come to mind! Only Tom and Mike get to have the last laugh on that one together. Until I get to lift a glass and wear an appropriately garish hat...I am forever yours. God Bless!"

"AICC and its membership will treasure our memories of Mike Brunton," said AICC President Mike D'Angelo, "Mike personified everything in the industry he covered for so many years - professional, hardworking, fun loving, dynamic, innovative, and reliable. He will be missed by so many. We're fortunate to continue to work with his wonderful family and colleagues. They are Mike's legacy and carry forward with all those same qualities."

Added AICC Ambassador Steve Young, "Mike was such a visionary in our industry, recognizing the need for an international voice for corrugated and paperboard packaging manufacturers as he founded International Paperboard Industry and Corrugated Today. He was a force for the establishment of the corrugated shows held in Paris, 1994-2002, and a fixture at many AICC meetings in the '90s, serving as a judge for our packaging design competitions as well as a frequent speaker on our programs. He was particularly instrumental in leading our industry's push into high graphics and its role

in the point of purchase and retail environment. The industry's current success in printing, merchandising and retail ready is his lasting legacy. I will remember him fondly."

Robyn Smith, NV Publications President and Publisher, said, "I did not work as closely with Mike as he was primarily involved in the editorial side of the business but the mark of his genius is, of course, evident in all the Brunton Publications and Corrugated Today. Mike was forward thinking in establishing several businesses in addition to publishing. As he put it one evening, 'Win or lose, I love the game."

"As the creator and leader of multiple industry publications serving paper-based packaging Michael Brunton was for over 50 years a gigantic and driving force," said Nick Griffin of Griffin Communications. "Mike was behind what we learned and what we know about ourselves globally as well as locally. We are all stronger for his behind-the-scenes omnipotence and we will greatly miss his wisdom and guidance."

"Although I had the pleasure of meeting Mike only once at the corrugated show in Paris in 2002, his passion for excellence, generosity and genuine concern for others has remained with me," said Len Prazych, Editor-in-Chief of Board Converting News.





Other Pursuits

Over the years, Michael's passion for excellence was most evident in other parts of his life outside the packaging world. Whether it was helping arrange a summer Ball to raise money for the local church or his boys' prep school, or hosting people in his own home, Michael was never happier than when he had a glass of wine in one hand... and of course, a cigarette in the other! He made people laugh, he made them comfortable and at ease - a rare skill

With his magazine called Clay Shooting, he and his youngest son,

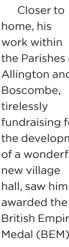
Ben, took the sport to the next level, arranging shooting competitions in the UK, Belgium, Russia and the U.S.A. Crowning glory, though, was when Ben won the World FITASC Championships in 1998.

In the world of horse racing. Michael, with his brother Tony, sisterin-law Sue and eldest son, Dan, owned Clarendon Stud for 14 years, breeding, training and racing Arabian racehorses. They went on to breed multiple Group winning horses, and sold horses to France and the Middle East, with progeny still racing with Clarendon bloodlines to this day.

> home, his work within the Parishes of Allington and Boscombe. tirelessly fundraising for the development of a wonderful new village hall, saw him awarded the **British Empire** Medal (BEM) in



the Queen's birthday honors in 2020. His meticulous planning, negotiating skills and pursuit of excellence saw the community in which he and Fiona lived benefit from many wonderful summer events, band nights, BBQs and Bonfire celebrations, raising money for the local community and its play park, its church - and finally the village hall, which sadly, Michael





never got to see officially open, as it is still about a month away from being finished.

My Thoughts

I have been touched by the kind words from Army friends, packaging industry heavyweights, clay shooting 'royalty,' Arabian racing enthusiasts and dozens of people from Michael's community – all of whom are shocked and saddened by his sudden passing. The COVID lock-down had not been kind to Mike and there is part of me that feels he was just missing his



friends, frustrated by not being able to have a good party and not able to get out and about.

I have grown up for the last 27 years in the packaging industry, at Mike's side, with dear Mum holding us on a steady course. I learned from the best. I strive to uphold his memory. I will miss him eternally. But as one industry friend told me, remember what Mark Twain said; "Good fathers not only tell us how to live, they show us."

Your wife and family are heartbroken. People from all walks of life, from all over the world mourn your departure – you have left a massive, gaping hole. But I will always hold onto this; Mum, Ben and I got to call you our best friend. Rest easy, Dad. ■





The JB Machinery family is deeply saddened by the loss of Michael Brunton, an industry leader, a mentor to many and most importantly, our friend.

Our thoughts and prayers are with the Brunton family and Michael's many friends and colleagues.





Winner of 'Best Digital Exhibition 2020'



he ConneXion event in June is a virtual reality exhibition, where converters from all over the world can visit with some of the industry's leading OEMs, software and service suppliers to see all the latest innovations and solutions for the modern packaging converter. The expo solution is tried and tested, following a successful debut to the global corrugated industry in November 2020 (for which we received 'Best Digital Expo' at the 'Digital Events Awards 2021'!). The second event is now being promoted to the global corrugated and folding carton industries.

From the comfort of your own desk, visitors are able to visit this dedicated trade show from June 1-8 inclusive, 24 hrs per day. Using a standard web browser, simply visit https://hyperfair.connexion.exchange/ and get yourself registered, for free, so you can get in on the action! The event opens on Tuesday, June 1.

With your user control panel, you can create your own avatar to walk around the event. Brand new for this event, we have a matchmaking facility, so you can book appointments with exhibitors and you can meet them on their booth, at a set time and interact by voice or video call directly in the online environment. To use this meeting booking system, you will



e your own avatar to walk
ne event. Brand new for this need to register and get access to the have a matchmaking facility, new control panel.
In book appointments with There is an easy to use floor plan, which allows you to teleport directly to an exhibitor's booth and there is

which allows you to teleport directly to an exhibitor's booth and there is also a tool that shows you who is online at the same time as you. This enables you to network with other visitors in realtime, using a text or voice call function.





If you are visiting 'out of hours', an avatar on the reception desk of each booth will display contact information and how to get in touch easily.

Once you are on a booth, you can view content from the exhibitor:

- Video
- Images
- Brochures
- Downloads

3D Product imagesYou can also interact with any of

the booth assistants and if you are visiting 'out of hours', an avatar on the reception desk of each booth will display contact information and how to get in touch easily.

Exhibitors include: Absolute, Avanti, Bahmüller, Baldwin Vision Systems, Baumer hhs, Baysek Machines, Bobst, BW Papersystems, Cito, Corr24, Domino, Dücker Group, EFI, E+L, Elitron, EMBA Machinery, Fosber, Friese, Helios, Highcon, HP, Hybrid Software, ISRA Vision, JB Machinery, JKSP Services, Karl Marbach, Koenig & Bauer, Koenig & Bauer Durst, Lamina System, Manroland, MHI Europe, Pamarco, SUN Automation, Swanline, TCY, Tilia Labs, W.H. Leary and Xeikon.

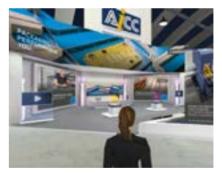
The event is supported by:

AICC - The Independent Packaging

Association, European Carton Makers

Association (ECMA) and the UK Sheet

Plant Association (SPA). ■







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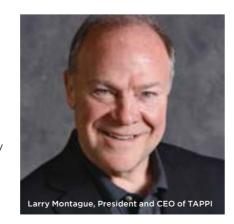
COUNTDOWN TO SUPERCORREXPO

LARRY MONTAGUE, PRESIDENT AND CEO OF TAPPI, AND MIKE D'ANGELO, PRESIDENT OF AICC, THE INDEPENDENT PACKAGING ASSOCIATION, PROVIDE AN UPDATE.

uperCorrExpo, the largest corrugated packaging focused exhibition in the Western Hemisphere, will be an in-person event Aug. 8-12 at the Orange County Convention Center in Orlando, Fla. The trade show and conferences were originally scheduled for September 2020, however, they were postponed due to the global pandemic. The last SuperCorrExpo was November 2016.

More than 5,000 visitors from the U.S. and 57 countries attended SuperCorrExpo 2016. What are your expectations or projections for attendance at this year's event?

Larry Montague: We are very optimistic with the rollout of the vaccine that by August a vast majority of those who want to be vaccinated will be and they'll be anxious to connect with others in a more personable way. Zoom fatigue is





starting to happen for many of us, so we're ready to get back to (safe) face-to-face interactions. We actually surveyed some of our previous attendees for another event back in February and one question asked was, "Will access to the vaccine impact your decision to attend?" Nearly 63% answered yes. That percentage might be even higher if we asked the same people today. Also, several states are relaxing restrictions on vaccine eligibility. This should help vaccination numbers go up tremendously in the U.S.

There is a significant amount of pent-up demand and attendees will want to get as much business done as possible under one roof at one time. We are realistic however, and know that attendance, particularly from international participants, will be down. In recent conversations with potential attendees, we have been told that the number of people from each company may be decreased, but the key decision makers will still attend.

Mike D'Angelo: We know that there will be challenges for international visitors borne out of uncertainty with European and Asian vaccination completion, but I have a high confidence that U.S., Canadian and Mexican attendance will be strong. The timing of SuperCorrExpo is



Mike D'Angelo, President of AICC, The Independent Packaging Association

actually quite favorable and people will be eager to travel and mix business and pleasure in Central Florida. Vaccinated populations in North America will be quite robust by mid-August.

What incentives are being offered to entice people to attend?

Larry Montague: We have a number of incentives in addition to the great conference content and variety of solution providers on the expo floor. A few of the incentives include:

- Unlimited VIP passes for exhibitors to hand out to customers to visit the exhibit
- Group discounts for companies attending the conference sessions

■ Location, location, location! It's not different physically from five years ago, but the circumstances and the environment have certainly been upended over the last year. What better place to get up and go now than Orlando, especially knowing the city has some of the U.S.'s best safety measures and precautions in place – from airport to hotel to theme parks and other fun, family-oriented adventures.

How many exhibiting companies have signed up (in 2016 there were 348)? Can you share any information about the amount and type of machinery that will be running on the exhibition floor?

Larry Montague: Understandably, the situation in March (at the time of this interview) is still fluid, especially internationally, but from what we are hearing from exhibitors they are really excited and can't wait to get to the show. When travel bans are lifted, we believe we will hear more from those internationally, as well as seeing the North American ranks fill out substantially. Each week, we are seeing additional companies sign up (at end of March we were at 231), and we are confident that number will continue to grow into the spring.

Mike D'Angelo: The exhibitors have been tremendously supportive and through their standing committees, have been engaged with show management throughout. They are watching events as closely as TAPPI and AICC are. They're as ready as we are!

What will be new or different this year compared to previous years?

Larry Montague: The biggest thing attendees can expect are solutions to some of the new challenges and opportunities we face during and post-COVID. Companies in our industry have done an amazing job

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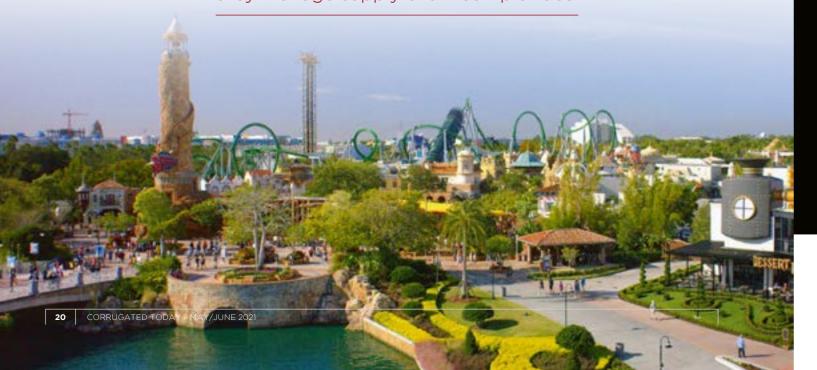
of pivoting during this time. And to be honest, some of these changes have led to better communication, increased use of technology to solve problems, like augmented reality, and they've learned to be more agile. SuperCorrExpo attendees will hear from experts and other peers on how they've accomplished this and how they manage supply chain complexities. They'll also be able to talk to suppliers about new products and services to help them optimize performance at their plants. Of course it wouldn't be SuperCorrExpo without some amazing relationship building and fun events. We're extremely excited about offering our attendees exclusive access to one of the most popular parks in Orlando (yes, that one) for four hours. Think broom sticks and managing the mischief (more details to come). It will almost be like having our own park for a night with no lines! This is going to be a memorable night for all of our attendees and their families.

We'll also have other new features:

- Attendees will receive a coupon booklet from participating exhibitors filled with prizes and special offers.
- The new Box Manufacturing
 Olympics, which is a combination
 of the AICC Packaging Design
 Competition and the TAPPI
 CorrPak® Competition. The
 entries will be available on the
 exhibit floor for viewing during
 show hours. We are hoping
 that this new competition will
 encourage companies to enter
 and be selected by the judges
 and attendees as the "best of the
 best."
- Special discounted pricing to the Orlando park Gala event
- Program content and keynote speakers geared to help attendees move forward in a positive way following the pandemic.

Mike D'Angelo: In one sense there will not be a difference because SuperCorrExpo remains the premier machinery, equipment, and services exhibition for the corrugated industry. Like it always has. Machine manufacturers have been busy throughout the "lost" year, installing machines, and developing new ideas. They have been unable to see many of their customers and prospects and they have a lot to share, very efficiently under the roof of the Orange County Convention Center. Here is where there will be a difference - equipment has never been more efficient than it is today. Now, the efficiency and speed that has been built into new machinery and equipment as a matter of design evolution will have to consider the experience of the past year and all that was learned with remote access, limited staffing, social distancing, and other previously unimaginable parameters that now need to be a part of what is at least a 30-year asset.

SuperCorrExpo attendees will hear from experts and other peers on how they've accomplished better communication, increased use of technology to solve problems and how they manage supply chain complexities.



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SCE attendees and their families will receive private admission to Universal's Islands of Adventure.

That's a new conversation. The same holds true for software, services, and logistics. These must be adapted for the next health crisis and we will begin to see how in August.

What COVID-19 related health and safety protocols will be in place? Will attendees be required to wear masks and social distance at all events – daytime and evening?

Larry Montague: We will follow the CDC guidelines that will be in effect in August in Florida, which we anticipate will include social distancing and masks being required at all group events. Overflow rooms will be available to allow social distancing in the conference sessions and during breakfast. There will be separate entrance and exits in the exhibit hall, and we are foregoing aisle carpeting to allow for easy cleaning and sanitization each evening by the Orange County Convention Center. Special food and beverage options will be offered that are individually packaged and sanitizing stations will be placed throughout the facility.

Can you share any details about the Surprise Event referenced on the web site?

Larry Montague: Only SCE attendees and their families will be allowed into this highly anticipated evening event at Universal's Islands of Adventure to enjoy dinner and private admission to attractions. Attendees will have unlimited access for four "magical" hours. This special event is one of the reasons we think attendees will want to bring their families as it will literally provide memories that will last a long time. From parents to kids, I don't know anyone who hasn't expressed some desire to visit this spot, and to be able to enjoy it privately and without the usual crowds will make it that much more amazing.

What are you most excited about with this event?

Larry Montague: The opportunity to bring our industry together after more than a year of forced isolation, limited travel and uncertainty. In the corrugated industry, the pandemic created a spike in production and while that was crucial to business, it has been over four years since many of our attendees (producers and suppliers) have been able to personally reach out to one another, relate their business needs, and let potential solutions resonate with one another. There is great opportunity to get a lot done at SuperCorrExpo, and that's what we're most excited about.

Mike D'Angelo: Our industry is one that is based on personal interaction. am most excited about seeing friends and colleagues, and meeting new ones, face to socially distanced face in the exciting environment of a major trade show. We've been off the road for too long!

Larry Montague: SuperCorrExpo is all about relationship building and every company and person in our



industry can benefit from that type of environment. Deals are made, but more importantly long lasting business and personal relationships are made. We look forward to seeing everyone there in August.

Mike D'Angelo: Larry and I appreciate the communication with and participation of so many exhibitors, attendees, and corrugated industry promoters as TAPPI and AICC and our committees have navigated through the challenges and opportunities of the past year. We are truly inspired by the ability of our colleagues to advocate for their companies, for their Associations, and for the industry at large simultaneously. Too often this year we've heard "we're all in this together." It's the together that is going to make SuperCorrExpo the great event that it will be this year.

SuperCorrExpo is all about relationship building.

"What an outstanding piece of equipment! My operators are just beside themselves, holding the same color all day long on a 150,000 piece order! They're just happier than hell! We'll be ordering a few more in the very near future, thank you so much!"

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TWO NEW MACHINE LINES IN WORCESTER

RAND-WHITNEY'S LEGACY FACILITY IN MASSACHUSETTS IS BOOSTING CAPACITY WITH A NEW APSTAR ROTARY DIECUTTER AND A SECOND EVOL FLEXO.

BY JACKIE SCHULTZ



and-Whitney, part of The Kraft Group, is on an upward trajectory of aggressive growth, both organically and through acquisitions. With New-Indy Containerboard, its joint venture with Schwarz Partners, the company now has five paper mills and over 20 sheet and full-line corrugated plants located across the country. These facilities are all making significant capital investments to keep up with robust customer demand.

Nowhere is this strategy more evident than at Rand-Whitney's legacy facility in Worcester, Mass. Nick Smith. President & CEO of Rand-Whitney, explains how the company's investment strategy has changed over the years. "In the past our tendency was to look for pre-owned equipment, however about eight years ago we made the switch to investing in new equipment with the latest technology, which has given us a significant competitive advantage."

The Worcester plant has been operating since the 1960s. All of the equipment has been upgraded over the last decade starting with a 50-inch MarquipWardUnited flexo folder-gluer in 2011 and culminating with a second MHI EVOL + Twin Box Slitter that replaced a 1972 S&S flexo late last fall. "These investments have allowed the facility to pivot from manufacturing graphics packaging to cost-effectively producing high-volume brown box business," Smith says. The upgrades

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"We are now close to three times more volume out the door with fewer pieces of equipment," says Nick Smith.

have significantly increased capacity. "Annual capacity off the corrugator is approaching 2 billion sq ft and converting is about 1.5 billion sq ft. Fifteen years ago that number was about 600 million sq ft. We are now close to three times more volume out the door with fewer pieces of equipment."

In the last 18 months the plant has installed an inside/outside print Apstar rotary diecutter from the Haire Group and the second EVOL. The Apstar is five colors - two colors on the inside and three on the outside. Although there are currently not many jobs requiring inside/outside print today, Smith says the diecutter was purchased "to get prepared for rapid growth in the direct-to-consumer e-commerce market, which values two-sided printing."

The Apstar has a Geo. M. Martin stacker as well as an automated backend solution from Alliance Machine

Systems International utilizing an UltraBREAK bundle breaker and UltraPAL automatic palletizer. The UltraBREAK maximizes the width of the diecutter, which is 126 inches. and the UltraPAL facilitates higher run speeds more consistently than a manual load former. The four-color EVOL has a BW Papersystems Twin Box Slitter and an Alliance high speed top feeder and Raptor 4x2 robotic load former. These auxiliary investments have helped allow the Apstar to average 8,000 kicks per hour and the EVOL to average over 18,000 kicks per hour, with both machines consistently exceeding the targeted 95% uptime.



The Apstar has a Geo. M. Martin stacker and an UltraBREAK bundle breaker and UltraPAL automatic palletizer from Alliance Machine Systems International.



Optimizing Space

The Worcester plant operates out of two locations - a 210,000 sq ft main facility and a smaller 130,000 sq ft building next door. Smith acknowledges that space is tight. "There's a lot of equipment and not much space for WIP, so now we're trying to figure out how to do an additional building expansion and drop in potentially two more pieces of equipment," he says.

Managing the complexities of high volume, high speed and order delivery requires a coordinated approach that involves equipment and processes. The plant uses computer management software from Amtech and Kiwiplan as well as internal systems for a variety of tasks, such as machine scheduling, tracking WIP, order entry, electronic factory tickets and quality management.

"Our focus is on the systems side," Smith says, adding that those systems allow the plant to manage more efficiently and provide total

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The four-color EVOL has a BW Papersystems Twin Box Slitter and an Alliance high speed top feeder and Raptor 4x2 robotic load former.





transparency to customers. "They can see everything. We share engineering drawings, what we're carrying in inventory and even GPS information for the deliveries, all real time. They can go into their iPads or iTouches to place orders. Everything in our plant is electronic and paperless." He says Rand-Whitney was one of the first in the industry to use EDRs (Electronic Delivery Receipts).

"In the last year our on-time delivery was 99.5%. We have a

"In the last year our on-time delivery was 99.5%. We have a ruthless focus on this. says Nick Smith.

ruthless focus on this," he says. "The environment we are all operating in is becoming more and more demanding and the combination of great equipment and great execution along with our systems are a true

differentiator. We are in a much more competitive position today than 10 years ago and will continue to invest and appreciate all the partnerships we have in place with our core manufacturing suppliers."

In a 2019 article. Smith said he wanted the company to be 100% larger in five years. Commenting on the status of that goal, he says, "It's happening quicker and frankly it's getting easier once you've gotten to the scale that we're currently at."

Show Plant

Smith and General Manager Adam Tominsky had the vision of making the Worcester facility a show plant, and they are very generous with plant tours. Anyone, even competitors, are welcome to visit the plant and see the equipment. "Our goal is to be the flagship demo plant for the supplier companies," Smith says.

In a 2019 article, Smith said he wanted the company to be 100% larger in five years. Commenting on the status of that goal, he says, "It's happening quicker and frankly it's getting easier once you've gotten to the scale that we're currently at. It's easier to compete with a brand new piece of equipment than a 1972 S&S. That is my advice to owners who haven't invested much. Over time they're going to be at risk of not being competitive." ■



EVOL operator Pedro Aponte (middle) with Adam Tominsky (left), GM, and Nick Smith, President & CEO

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IN CONVERSATION WITH JIM PORTER

THE RECENTLY RETIRED WESTROCK EXECUTIVE REFLECTS ON HIS CAREER, LESSONS LEARNED AND CURRENT MARKET DYNAMICS.

EDITOR'S NOTE: JIM PORTER IS NO LONGER AN EMPLOYEE OF WESTROCK AND IS SPEAKING IN HIS INDIVIDUAL CAPACITY.

BY JACKIE SCHULTZ

or nearly half a century,
Jim Porter has worked,
and in many instances,
led, prominent independent and
integrated paper and packaging
companies, placing him in a
category of distinguished industry
veterans. On Dec. 31, 2020, he

retired as WestRock President, Business Development & Latin America. In a videoconference interview, Porter reflected on his 46-year career and provided some insight on industry trends, presentday topics and some advice for young professionals.



He began his career in 1974 with a degree in Forest Management from the University of Missouri. His first job was field forester with Menasha in the company's Washington State timberlands. In 1993, he joined Southern Container and was President and Chief Operating Officer when RockTenn acquired the company in 2008. He was President of RockTenn's Corrugated Packaging business, leading the string of acquisitions that led to RockTenn becoming the second largest corrugated packaging company in the world. With the merger of MeadWestvaco in 2015, RockTenn became WestRock, He was then President of WestRock's Paper Solutions business, leading the operation, sales and global supply chain of all WestRock mills. In his final four years with WestRock, he focused on the growth of the Latin America businesses, including Integrated Forestry, Virgin Containerboard Mill and Corrugated operations in Brazil and joint venture with Grupo Gondi in Mexico. In 2018, Porter received the RISI Lifetime Achievement Award and was inducted into the International Corrugated Packaging Foundation's Circle of Distinguished Leaders.

When asked about his proudest achievements, he says he has three: the startup of Southern Container's Solvay recycled containerboard mill in upstate N.Y., the growth of RockTenn and the teams of people who helped him achieve those successes. Regarding the Solvay mill, he says, "The Grossman family bet the farm with their first paper machine and later turned it into three machines. It's still one of the most efficient, productive and profitable paper mills in the country. The team concept and work culture that we built there was just extraordinary." When Southern Container was sold, RockTenn was a \$2 billion company. "Over the next 12 years, the senior leadership team, which I was blessed to be a part of.

When asked about his proudest achievements, he says he has three: the startup of Southern Container's Solvay recycled containerboard mill, the growth of RockTenn and the teams of people who helped him achieve those successes.

was able to grow that company to \$18 billion. I am extraordinarily proud of that. Those things are not done just with engineering. It comes back to relationships and building strong cultures and strategies and relentless execution."

Thinking about why companies like Menasha, Southern Container, RockTenn and WestRock are successful, he says they all possess a culture and core values that inspire excellence and loyalty, a winning competitive strategy, lofty goals and relentless execution. With family businesses like Menasha and Southern Container, he says success is inherent in the ability to balance family with professional management. "The execution of a successful business needs talent and professional leadership and sometimes you find that in the family and sometimes not. It's a juggling match."

Present Day Dynamics

Turning to present-day issues, Porter says the global pandemic and the booming e-commerce market will have significant long-term impact on the corrugated industry. "There is no question that life will never be the same, very much like 9/11. As a culture and a global society we're learning about the risks of contagious disease and the fact that we have to be careful."

He says the pandemic is forcing new behaviors in the workplace, with companies becoming more flexible about where employees work and teleconferencing programs reducing the need to travel. "I've been able to communicate globally with many different locations much more crisply than scheduling a meeting two months from now and flying to Brazil or Mexico City or wherever. The industry will drive productivity levels

at a much faster pace than the old way of 100 percent face-to-face meetings."

Shopping habits are also shifting with more people placing e-commerce orders from the comfort of their homes. "Every day I'm carrying four or five boxes up the stairs. I love to turn them over and cheer when I see they're WestRock's." Porter says the increase in e-commerce highlights the importance of digital technology, which is driving increased automation at box plants. "Clearly digital execution, e-commerce and the supply chains that are required to support that is a huge change and that's going to continue to accelerate."

The rapid increase in e-commerce combined with the disruption of COVID-19 and cyber security attacks have created a perfect storm of containerboard supply shortages. Box plants have been juggling the increase in demand with tight supply. Porter believes the new capacity coming online will help balance the shortage, "WestRock customers in all parts of the world are short on paper because there was this explosive spike in demand. It will come back into balance. Where there is demand, supply will follow. Sometimes the supply follows in oversupply. Sometimes undersupply. Supply/ demand is never perfectly balanced because once it gets perfectly balanced something will change that and will cause it to be long or short. New capacity will catch up. I don't see demand dropping off. I think there will be incremental growth and the industry is poised for solid times ahead."



 ${\sf Jim\,Porter, Tom\,Stigers\, and\, David\, Chrismer.\, All\,\, three\,\, worked\, together\, at\,\, Solvay,\, RockTenn\,\, and\,\, WestRock.}$



However, the amount of new capacity coming online in the next few years has some analysts concerned that the U.S. is headed into an oversupply situation. "I think not," Porter says. "There is new capacity coming and it needs to come. There are some older assets that deserve to be idled over time. The dynamics over the last two or three decades show those ebbs and flows of new capacity demand and old capacity going offline so the balance will be fine. Neither of those situations are a crisis. It's just part of a very large global supply/demand system that is capitalintensive, so it takes time to bring that capacity on, to reach that balance."

WestRock was recently the victim of a cyber attack. While Porter deferred comment to those within the company better positioned to respond, he noted that the attack emphasizes how reliant industries are on digital solutions and the importance of protecting those solutions. "That demonstrates the vulnerability that society faces." As far as advice for other converters, he says, "As executives, just hire the best and make sure that is top of mind."

Market Trends

During a presentation he gave at the 2018 Corrugated Week conference in Indianapolis, Porter said there were five macrotrends influencing the corrugated industry: the transfer of tree ownership, lightweighting, e-commerce, China

and changes in consumer habits. While these are all still relevant today. some to a lesser degree like the transfer of tree ownership to TIMOs and REITs, he added three more: digital, sustainability and talent.

Digital follows the trends in e-commerce with consumers ordering and having products delivered within days or even hours. "Amazon, for example, has full end-to-end connectivity, knowing exactly when that order is placed and when it is going to arrive. It's complete transparency along the way. We need to make the packaging industry the same," he says. "Harnessing the power of digital solutions, which is fast, efficient and lower cost, will be transformational."

With sustainability, he says consumers are no longer okay with packaging that gets touched only once and then discarded. "Consumer products companies, our customers. are begging us for solutions to remove plastic, foils and the materials that make the package and the product non-sustainable, so the amount of innovation and change that's on our doorstep is a huge opportunity."

Regarding talent, Porter says that is the "key to everything. It's not just talent, it's diverse talent. We've got to build companies and societies of diverse populations of smart people that are invested in our solutions. The companies that are able to do that best are going to be those that win. We must create a more diverse.

inclusive sense of belonging and equity in how we work and live."

The subject of people is clearly an important one for Porter. "This is a people business that starts with the relationships and the trust and respect that we build with those relationships. We can get caught up in the science of digital and innovation and automation; we need those but can't lose sight that this is a people business. As an industry we love machines, and we need great machines to create great products and efficient execution. But the people make these machines come to life and the innovations is what helps customers compete and win.

"Customers buy on price and expect innovation and innovative solutions, but they also buy based upon trust, integrity and relationships, people they can count on," he continues. "That's one of the biggest keys to any success I have had. The center stone of how I did business was developing those deep, trusting relationships that stick with you forever."

For the younger generation just starting out in the industry, he offers this advice: "The key is starting with your own personal integrity. Who are you? When you look in the mirror do you like yourself? Are you trustworthy? Are you worthy of being respected? Do you respect and value others, or are you just trying to win? Secondly, learn from others. Listen and seek to understand. Our ears are bigger than our eyes, so let's use them.

"When I began my career, I really knew nothing compared to the people working in paper mills for 30 years. The only way you can succeed is by listening to those people's challenges and opportunities and help them to be successful and remove the barriers in their way. If you can de-bottleneck another person's or another team's problems and help them be more successful, then you've won because they've won."

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No Regrets

Looking back on his career, Porter says he would not do anything differently, "I'm proud of how this has all turned out. There have been so many forks in the road, and I've had to make many decisions and choices. I'm sure some weren't the best, but I always remind people that if you make a bad decision, just make a good one quickly thereafter. You're going to make mistakes and fall down, but don't worry about that. Get up quickly and make another good decision quickly and get on with it. We must win more than we lose, otherwise we run out of gas. But losing is part of the game. Just win quickly next time. Most important, win the right way, with character, integrity, respect for others. Not win at all cost. Win, but do it with dignity. More difficult, but when you do, you've really won.

"There is nothing I would change in my career. It has been a wonderfully rich experience and I'm so blessed to have met all the wonderful people I've worked with. These people today are still the center of my memories and my

wife Pam and I hold those relationships of employees, customers and suppliers in very high regard. We hope those relationships last a lifetime."

Throughout the years he has had many mentors. One of his first was Bill Lansing who worked at Menasha in the Land and Timber Division. Others included Steven Grossman, Joe Palmieri and Jack Schwarz. He notes there were also many other friends and leaders that helped him and the entire paper packaging industry grow and succeed.

Porter remains active in the industry as a strategic advisor to WestRock and mentor to many highpotential WestRock employees. He is a member of many boards and other groups largely focused on conservation. These include The American Forest Foundation, The Family Forest Carbon initiative - a joint venture of AFF and The Nature Conservancy - The Forestry Association of S.C., The Long Leaf Alliance, The Port Royal Sound Foundation, The Low Country Land Trust, The Center for Heirs Property Preservation and more.



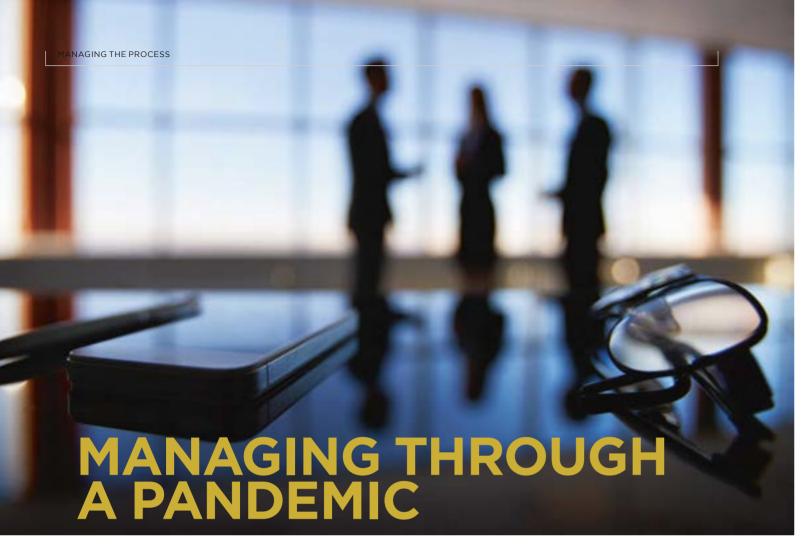
Pam and Jim Porter on their 3,000-acre tree farm.

His wife Pam shares an equal conservation contribution to boards and other groups including an appointment by Governor McMasters to the South Carolina Board of Directors of the State Conservation Bank, governing all environmental/ conservation investment in the state of South Carolina, The Woodland Operating Committee of the American Tree Farm System, and many womenoriented conservation groups across the U.S. involving the forest, tidal low country salt marsh estuaries, and South Carolina eco systems that deserve lifetime conservation.

He and Pam own a 3,000-acre tree farm in Jasper County, Coastal South Carolina, 35 miles from their home. The land is certified to the American Tree Farm System standards and they follow best management practices for all of their forest and wildlife management activity. Porter notes this effort is a joy and a commitment to keep forests as forests for many generations to come.

In the last four years, they have planted 280,000 pine trees and actively and sustainably manage the forest for wood, wildlife and water clarity. "That's one the biggest joys in our life," he says, adding that the other joy is their three children and seven grandchildren. Not to mention a new puppy, Addy. ■





FOR MORE THAN A YEAR BOX PLANTS HAVE ADAPTED THEIR BUSINESSES. NOW IS A GOOD TIME TO REVIEW PROCESSES AND PROCEDURES.

BY DICK TARGET

"ON TARGET" CONSULTANTS

n my articles over the last several years I have discussed the technical side of the business. Specifically, the calibration of flexos and rotary diecutters and how those adjustments affect the quality of boxes. During the last 15 months or so, we have been challenged in ways we would never have thought of in our world of corrugated. This COVID-19 pandemic has presented many positive opportunities as well as a few challenges. The six foot spacing requirements, the wearing of masks as well as the washing of hands in a manufacturing environment. It has not been easy, for sure, delivering boxes to our customer's facilities and interfacing with the shipping

and receiving personnel. How do we handle returns and offer replacement orders when things need to be corrected? As an industry, we have done a phenomenal job during this difficult time and we certainly will

come out stronger and more precise on the other side.

In the meantime, I would like to ask the top management teams to consider the following in their list of responsibilities. Take the time to have



a plant wide meeting and thank all of your valued employees for a job well done during this difficult time. Thank everyone - from the people on the receiving docs, the forklift truck drivers and the valued crews that operate all your machines in the plant, to the floor supervisors who keep everything moving, from roll stock, receiving and delivering corrugated sheets and starch and ink inventory. And let us not forget the designers, the office staff and for sure your customer service people who are the contact with customers on the phone. And then the most valuable part of your business - your customers. I am sure that they have been extremely patient, sometimes flexible when possible, and understanding and they need to be thanked.

Due to the pandemic, do you have all the same people in the right place? Have you made multiple personnel changes in an effort to respond to business changes caused by COVID? Are there voids in your plant? These points can easily be identified through information meetings. Be sure to include supervisors and their crews.

For top management teams, I feel that this is an appropriate time to review the basic fundamentals required to run a profitable operation.

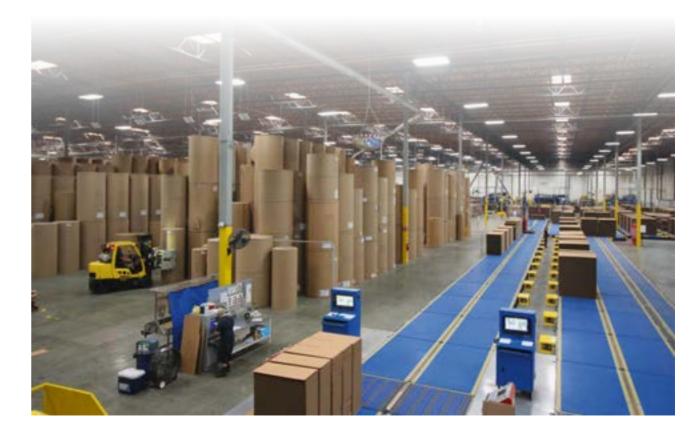
Take time to meet with your maintenance staff and review the condition of all the equipment on the floor. I know that lead times for parts and raw materials have grown considerably due to the shortages caused by COVID. Service appointments could have been changed or cancelled. How do you stand on parts inventory? How about ink, starch and shipping supplies? Strapping material, for example. Are all of your major and minor suppliers still in business in the same format? In previous articles I discussed predictable maintenance and a plan for scheduled maintenance for all machine centers.

Daily Checklist

I do feel that this a good time to discuss and review the required "daily chores" for your existing and maybe new supervisors in each of your departments. Take for example, all of your flexos, flatbed and rotary diecutters. They each have specific and individual requirements. As your supervisors are busy expediting product on the floor, they should be observing and checking on the following components:

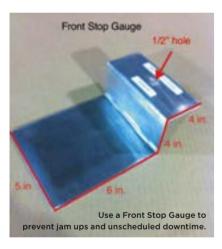
The Feed Sections:

■ Hopper Height - These are not only machine specific, but the height is somewhat dictated by the weight and size of the sheets. Are the liners light weight (35#) or heavy weight (69#)? Are the sheets single or double wall? Crews may sometimes struggle with these variables and adjustments.



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- Feed Roll Nip Settings Are the crews checking these as they relate to board caliper? Remember: You are only permitted to lose 0.003" (0.08mm) in sheet caliper during the converting process.
- Be sure the crews are using the required Front Stop Gauge in order to avoid jam ups and unscheduled downtime. This will also minimize exposure for injuries to the crews. This gauge sets the height of the front stops 0.063" (1.6mm) above the sheet being fed regardless of the board caliner.
- Be sure both Front Stops are set at the same height.
- Again, be sure that the crews are accurately checking caliper loss before and after converting.



Gear Train Registration.

■ The gear train registration points should all be on Zero before the press is opened and as the press is being closed when the setup procedures are completed. This will improve registration accuracy and will reduce setup times.

Print Stations

- Pre-Mounted Plates Are the register dials (either manually set on the dial or on the IDT) set on Zero? Do all the plates follow the 2" (50mm) set back rules? If not, are they properly marked?
- Partial Plates Are the plates properly marked so as to assist the crew in setting the register?
- Impression Roll Settings If the print cylinder and the impression roll settings are properly set, the impression roll dial or the IDT settings should be set at board caliper.
- Pull Bands Be sure that when required, the pull bands are set at 0.020" (0.5mm) less than the total thickness of the printing plate material (the mylar backing plus the thickness of the plate itself) to assure proper sheet control without the pull bands picking up any ink. Use pull-band printing plates on print stations that are not being used for the current order.



Are the anilox rolls clean?

If after a wash cycle, the surface of the anilox roll is shiny or wet, that means there is dried ink in the cells. That area must be cleaned of all residual inks.

Slotter Sections Settings

- Lead Register Dial should equal the lead flap dimension.
- Trailing Edge Dial should equal the lead flap plus the body of the box.
- The nip settings of the slotter heads should be set at board caliper. The pull collars and nip rolls should be set at board caliper less 0.020" (0.50mm).

Folding Sections

- Check to be sure that the folder entrance section nip rolls are parallel. They should all be set at 0.110" (3mm). This will continue to assure box squareness as the sheet enters the folding section.
- Are the belts evenly worn and are they tensioned correctly and evenly operators' side to drive side?

Diecut Section

- Be sure that all the cutting dies, regardless of their size, have the Zero register numbers located on the lead edge of the wood on the operator's side.
- Check on each order to see that the Zero register number is properly used on the register dial or on the IDT.
- Check to see if the first row of bolt holes on the cutting dies are mounted on the Zero line on the die drum. This will assure accurate registration
- Carefully monitor the wear on the die blanket.

Check Proper Run Speeds

Depending upon the sheet size. each order should have a proper maximum and profitable run speed. This information should be checked during each run in order to minimize iam ups and unscheduled and expensive downtime.

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- Check the tooling for the next job while the present order is running. This is a good time to complete this function in order to minimize downtime.
- Centerline locator holes should be located on the lead and trail edge of your printing plates. This will assure that they are mounted square and proper. There are times when the lead edge mounting strips are damaged, and this very fact may make it difficult to accurately mount the plate on the cylinder.
- Check to confirm the 2" (50mm) setback for proper registration settings.
- Check all the cutting dies for the Zero register numbers. Note: many cutting die suppliers only put the register number on rotary cutting dies and not flexo folder-gluer dies.



The proper zero point on every print cylinder is located exactly two inches from the mounting strip on each cylinder as shown in this set of test printing plates.

Be sure to check for all safety protocols. We must protect our most valuable assets: Our employees!

Schedule technical meetings with your ink suppliers. Proper ink management is necessary and important! Things may have changed in their companies. They may have new employees who will not be familiar with not only your plant but special requirements and colors for your major accounts.

Be sure that your crews use and understand the proper "pH" adjusters that are required for consistent color control. Remember, there are four main ingredients in the ink that we use.

- Pigments
- Resins
- Amines
- Water

They all have their own place in the ink formula, and they must be maintained, monitored and understood. The amines maintain the pigment/resin relationship and that is the main tool that controls the color. When we smell the ink, that says that the amines have evaporated, and they need to be replaced. The ink supplier should have their own specific MEA's (Mono Ethanol Amines) that are chemically compatible with their own pigments and resins. In future articles I will discuss ink and solid ink practices for everyone to review.

Note: I am always concerned about plant safety. Please be thorough and impress upon all your seasoned and new employees the importance of safety, a safe work environment and the importance of following the rules established by your plant safety committee

As always, enjoy your job! ■



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CUSTOMERS, CULTURE AND PEOPLE

FOR MORE THAN A CENTURY LIBERTY PACKAGING HAS HELD FIRM TO THIS TENET WHILE CONTINUING TO SUCCESSFULLY GROW THE BUSINESS.

BY JACKIE SCHULTZ

trategic acquisitions and investments have redrawn the landscape for Liberty Packaging's market presence across major regions of the U.S., expanding the business's scale and geographic reach, particularly in the Midwest and Southwest.

Based in Minneapolis, Minn., the family-owned company has changed considerably since its founding 103

years ago as a supplier of refurbished wooden boxes. Four generations of the Fiterman family have facilitated continued growth and expansion while preserving their independent family culture that is held up as the business model for success. Today, Liberty Diversified International (LDI) is one of the largest privately held companies in the Midwest.

"We work every day to have the

mindset of a smaller, independent packaging business while being able to invest in the talent, equipment and resources necessary to provide the complex solutions global manufacturers need. We believe there are very few companies that can do both of these well," says Matt Homan, LDI President and CEO.

Paper and packaging is the largest segment of the LDI portfolio, which

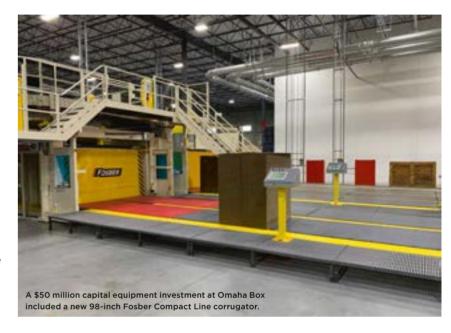
Four generations of the Fiterman family have facilitated continued growth and expansion while preserving their independent family culture that is held up as the business model for success.

also includes office and building products. The segment is divided into North and South business units. Combined, there are five sheet plants, four corrugator plants, a sheet feeder partnership, distribution facilities and a 100% recycled linerboard mill across seven states and Mexico.

The corrugated plants offer a core set of competencies for industrial and protective packaging, diecuts and RSCs in addition to their own distinct products and services. Their strength is providing innovative designs and complex supply chain solutions for customers who may have larger numbers of SKUs and varying quantities of product or require warehousing and fulfillment.

"Every one of our plants has certain skill sets that we leverage across the regions. This has helped us differentiate in all our markets we serve at LDI. Having this footprint is how we satisfy those customers that have three or four plants in North America," says Jack Fiterman, LDI Vice President of Business Development.





He says Liberty's niche is "Delivering superior packaging solutions that the small players can't and the giants won't." That business model can be traced back to Fiterman's grandfather, Ben Fiterman, who started the company's first sheet plant in 1940. "He used to say 'If you take care of your customers and your employees, everything else will take care of itself.' I think that still holds true today."

The Liberty Triangle

The growth in the Midwest region with the acquisitions in 2016 of Omaha Box in Omaha, Neb., and in 2017 of Miller Container in Rock Island, Ill. is its own success story. Referred to as "The Liberty triangle," the region includes manufacturing and distribution facilities in Minnesota, Illinois, Iowa and Nebraska and employs more than 500 people.

The two acquisitions doubled the business across four corrugators, expanding products and services for a strategic customer base. Greg Theis, Vice President of the Midwest business unit, holds up Omaha Box as an example of the company's approach and level of commitment to the market. Liberty invested approximately \$50 million in a new 335,000-sq-ft state-of-the-art facility in Omaha as well as new equipment, which included a 98-inch Fosber Compact Line corrugator, a 50-inch four-color Isowa

Jack Fiterman says Liberty's niche is "Delivering superior packaging solutions that the small players can't and the giants won't."

CORRUGATED TODAY » MAY/JUNE 2021 4



In 2019, Omaha Box relocated to a new 335,000-sq-ft state-of-the-art facility.

Ibis flexo folder-gluer and material handling components from Alliance Machine Systems International.

These investments have provided a foundation for considerable growth. Monthly capacity has increased by nearly three times since the investment. "We really didn't have space for big runs and inventory," says Ron Kenkel, General Manager of Omaha Box. "With the new machinery, improved flow and warehouse we're able to run larger truckload quantities. The move allowed us to grow with our customers."

The plant's primary mix of business is 65% flexo and 25% diecuts. Markets include heavy and light manufacturing and food. The new facility is AIB

certified. ISO certification is expected this summer.

"The markets that we're going after haven't changed but how we approach them has," says Dan Gigstead, Regional Sales Director. "We're not just thinking about what fits inside Omaha Box. We're leveraging the region to service larger segments of our customer's business bringing them a total solution."

Gigstead is responsible for sales across the entire region, ensuring a consistent market message. Jerry Cormier, Regional Operations Director, oversees capital investments for the region, making sure there is redundancy for tooling, maintenance and parts.

New technology across all the facilities reinforces synergy and shared connectivity, says Cormier. "Liberty made a significant investment in technology in regard to our ordering and manufacturing systems so that Omaha is tied into the rest of the facilities. We have connectivity on a minute by minute basis so from a capacity planning standpoint we can make decisions very quickly for our customers." The box plants use ERP systems from Amtech and CTI (EFI).

Theis credits the management team and the support provided by the corrugated plants in Minnesota and Illinois for Omaha Box's successful relocation. Most of the assets from the previous location were moved. "Customers saw very little disruption when we were going through that move and I think that's a testament to the team and the region and how they supported each other. From a sales perspective that's a huge component of the wins that we've had in developing a platform for value for our customers."

"We were able to rely on the



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81 years of producing tying machines, We have 100% share in Japanese market, and also our machines are No.1 tying machines and loved in the world. Greg Theis, Vice President of the Midwest business unit, holds up Omaha Box as an example of the company's approach and level of commitment to the market.

other facilities in the region that had similar machines that could cover the production that we couldn't do because a machine was being moved," says Kenkel. "All three facilities pitched in, depending on the capacity of the equipment and what we had at the time," adds Cormier. "Without hesitation the teams swooped in and helped each other out. From sales, customer service, all team members were on board ensuring a successful outcome."

Concurrent with the Omaha move, they also installed a Rapidex jumbo flexo folder-gluer with an inline diecutter in Liberty's flagship operation in Golden Valley, Minn., as well an Isowa Falcon flexo folder-gluer in Brooklyn Park, Minn. "All of that capital and installation and motion happened within about six months of each other," Theis says.

Cormier estimates they moved more than 25 machines between 2019 and 2020. "To lay out our facilities to be more productive and add capabilities, we really reset our whole business," he says. "Collectively as a result the region is that much stronger. It was a significant transformative year for our region and our business," adds Theis.

The bottom line result was improved operational performance. "From an MSF perspective Omaha is producing 60-65% a month more than prior years," Cormier says. Overall in the Midwest Liberty Packaging is up well over 20% than the prior year. "Even with all of the challenges with COVID and staffing, all four of these sites kept the ball moving."

Theis, Cormier and Gigstead are relatively new to Liberty, but each have more than 20 years of industry

experience. "We bring a different perspective on how we're managing our business," Theis says. "Liberty provided us the avenue to do that. Not too many companies would have taken that risk to say 'Go ahead and move 25 machines and put in a new ERP system and you can have a Falcon and a jumbo as well as moving Omaha Box, and this team pulled it off and are in a position to win."

Preserving Legacies

Acquisitions and investments in the Southwest have followed a similar path as the Midwest region. In 2002, Liberty acquired Service Container Corp. and opened a sheet plant in Mexico. In 2014 it acquired Harbor Packaging in Poway, Calif., and in 2018 it acquired Preferred Packaging in Phoenix, Ariz. In March, Liberty announced that it had acquired Southern Container, a sheet plant in Houston, Texas.

Acquisitions will continue to be a strategic component of growth, according to Homan. "LDI has a strong track record of growth. Our team has done a nice job of this through organic growth in almost all of our markets and by adding in businesses like Omaha Box, Miller Container and others to the family along with their strong teams. Our goal is to continue to find potential partnerships and acquisitions that make sense and to continue to invest in our capabilities and our team so we can grow with customers who value what we bring to their business."

not a price first strategy. Instead, it is driven more by product mix, location, and most important, company culture. "Culture is a big part of it and the

mindset that we are not a mill driven company," Fiterman explains. "We want to partner with businesses that share our values and add talent and we want to make sure that as we grow the business we keep their legacy alive even as we build Liberty across the market."

Bob Knapp, former President of Omaha Box, says that is exactly why he sold his company to Liberty. "Omaha Box Company was operating with fourth generation family management when we decided the time was right to talk to potential buyers. Being such an established operation, one of our primary concerns was how a sale might impact our employees," he says. "I have known the Fiterman family and LDI for over 40 years. Not long after we started discussions with Jack Fiterman, we were convinced Liberty would be the best choice regarding the future stability for growth for not only our employees but the business as well. It is evident with the incredible new facility and equipment the commitment

Concurrent with the Omaha Box move, the team also installed an Isowa Falcon flexo folder-gluer at the Brooklyn Park, Minn., plant





"Our goal is to continue to find potential partnerships and acquisitions that make sense and to continue to invest in our capabilities and our team,' says Matt Homan.

the Fiterman family has to the area and their Midwest

Liberty's own CITE Values are a road map for determining if a company is a good fit for acquisition. CITE stands for caring, innovation, trust and excellence. "This a simple way of doing a check to say, 'Are you living our core values as to how we think we differentiate ourselves as a company versus another company?" Fiterman says. "We look for companies that have the same core values, a strong management team and are looking for a company to continue their legacy but be part of something bigger."

Differentiation and customer focus are additional deciding factors, he says. "Our box plants have to stand alone and differentiate in the marketplace. Most of the companies out there that would be a target for us are the ones whose owners would say, 'We're doing this different and we care deeply for what we have built and want to partner with LDI and never lose our legacy."



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KONGSBERG IS NOW A STANDALONE BUSINESS

WITH NEWS RELEASED IN EARLY APRIL OF THE FORMATION OF A STANDALONE BUSINESS, DAN BRUNTON SPEAKS EXCLUSIVELY WITH STUART FOX, PRESIDENT OF THE NEWLY NAMED KONGSBERG PRECISION CUTTING SYSTEMS, ON ONE OF THE CONNEXION 'CEO IN THE SPOTLIGHT' PODCASTS.



ongsberg entered a new era on April 6, transforming into a standalone company, Kongsberg Precision Cutting Systems. The transformation follows the acquisition of the business from ESKO by OpenGate Capital. The new entity of Kongsberg PCS brings with it the opportunity to innovate and expand into new markets.

"This is truly an exciting day for everyone at the company," said Stuart Fox, President of Kongsberg PCS. "Since 1965, the Kongsberg name has been synonymous with innovation. Our systems have helped lead the industry in delivering precision, reliability and quality through seven decades. Following the acquisition by OpenGate Capital, we will now focus on our future, and the next generation innovation and growth."

Rich History

Founded in Norway in 1965, Kongsberg was purchased by Esko (then Barco) in 1998. In December 2020, Esko agreed to sell Kongsberg to private equity firm OpenGate Capital.

In terms of geographic reach, the company has a wide-reaching network of offices and facilities. In so far as the various locations are concerned, they are as follows:

- Headquarters in Gent, Belgium and Miamisburg, Ohio, USA;
- Research and development facility in Kongsberg, Norway;
- Production facility in Brno, Czech Republic;
- For sales support, there is an entire global network of employees and agents.

"Esko is certainly focused on the packaging and print market, but we just

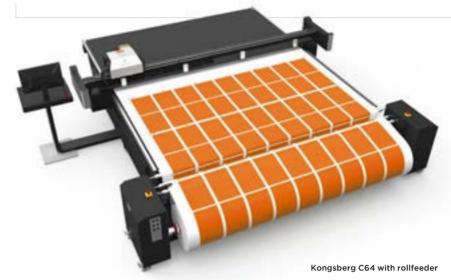
started to feel that we had things we wanted to do and being part of such a large entity, we were having to apply the brakes a little in our development," noted Fox. "While Esko remains focused on its portfolio of software and systems, breaking away as a new entity frees us up to accelerate with our own product developments in hardware and software."

COVID Impact

Like all businesses, the last 14 months have been tough. "We were no different than any other manufacturing business in that we had to implement new protocols and learn how to manage installations remotely," said Fox. "We were lucky that many of our customers knew our equipment quite well, which meant we could still install with the help of their own teams. But we have certainly

"We will be developing strategic initiatives to further innovate our digital finishing hardware and software solutions, as well as growing the Kongsberg brand beyond the packaging industry."

STUART FOX, PRESIDENT OF KONGSBERG PRECISION CUTTING SYSTEMS



learned a great deal over the last year or so and there are many valuable lessons we will take forward with us as we start the exciting journey of being our own company."

Of course, with problems come opportunities. We wanted to know what the plans are for future development. Although corrugated and folding carton are the prime markets for Kongsberg, what other opportunities are out there?

"This is an opportunity for the Kongsberg team to realize its ambitions and to explore new markets," added Fox. "We will be developing strategic initiatives to further innovate our digital finishing hardware and software solutions, as well as growing the Kongsberg brand beyond the packaging industry. There are some interesting opportunities for us to evolve our technology and we are already working on systems that will be ideal for textiles and other fabricating/engineering industry sectors."

Digital Focus

One area of the packaging market that Fox sees as key is the rapid development of single pass digital print on corrugated. "We have been working closely with many of the digital printer OEMs and the strides being made in increased output, especially from single pass digital printing machines, is where Kongsberg comes to the fore," said

Fox. "With the systems we offer, we can provide digital cutting systems that can handle the throughput of these presses for their 'sweet spot' jobs that count as small to medium runs. This frees up the analog flexo printing and diecutting equipment to do what they do best. The combination of digital print and digital cutting is a powerful tool for the modern box plant."

Continuity is Key

"While we are excited about the future, we are also committed to ensuring we honor our heritage. We have an incredible team of 400 people, many of whom have been a part of the Kongsberg family for more than 30 years," said Fox. "The Kongsberg values that are important to our customers – the strength, the performance, the longevity of the machine – will endure.

"Sales, service, consumables and spare parts will all continue as usual," added Fox. "Customers will



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receive the same level of service during the transition and they can look forward to business as usual throughout 2021. We will continue investing in our table technology, and in the coming months we will be showcasing the latest developments with our automation solutions."

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RUSKEN PACKAGING CONTINUES GROWTH

THE INDEPENDENT SUCCESSFULLY CONSOLIDATED E. SMITH BOX AND MULLEN & COMPANY INTO A 550,000-SQ-FT FACILITY IN GEORGIA.

BY LEN PRAZYCH

ny box maker who has undertaken a plant consolidation project knows the level of communication, complexity and logistical precision that needs to happen for a successful outcome. Greg Rusk, owner of Cullman, Ala. based Rusken Packaging, an independent company founded in 1974 by Greg's father, Bobby, knows the process well.

Having grown the Rusken brand to 14 facilities in seven southeastern states by a combination of deft acquisition and astute consolidation, it is reportedly the largest independent in the southeast, aside from Pratt Industries in Conyers, Ga., where not coincidentally, Rusken's latest consolidation project came to fruition in the midst of a pandemic, no less.

Cameron Bailey, Rusken Packaging Project Engineer, assumed the monumental task of facilitating the move of the machinery and assets of Conyers based E. Smith Box, which Rusken acquired in 2018, and Canton, Ga. based Mullen & Company, which Rusken acquired in 2019, to a 550,000-sq-ft facility occupied by its partner Corrugated Supplies Company (CSC), which operates a

pair of 110-inch BHS corrugators that provide all the containerboard a new sheet plant could possibly convert. (This model of having a sheet plant located conveniently next to a CSC corrugator operation is one Rusken has incorporated in its Cullman and Harrisburg, Ark., locations.) Having all operations under one roof would improve efficiencies and reduce transportation costs: instead of moving sheets across town, they would be moved across a facility.

"The real challenge was running two plants simultaneously while moving several pieces of equipment

Rusken Conyers leadership team from left, Margaret Schlumper, Quality Manager; Steve Ingram, General Manager; and Susan Bracket, Customer Service Manager.

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"The real challenge was running two plants simultaneously while moving several pieces of equipment from those locations to the new facility and not dropping the ball while several were in the air at the same time," says Cameron Bailey.

from those locations to the new facility (Rusken Conyers) and not dropping the ball while several were in the air at the same time," says Bailey, who began his work by getting bids from electrical contractors who would install a 2500-amp service to power several pieces of converting equipment. Between summer storms and outages, Georgia Power, the Atlanta utility company, installed a new transformer that would bring electrical service to the facility. Bailey then negotiated more bids and

A Bobst FFG 8.20 Discovery flexo folder-gluer was the first ne

retained construction contractors who would build out office areas, plumbing contractors who would install new plumbing, and concrete contractors, who would prepare the facility's production floors for most of the machinery that would soon be moved there.

Logistical Details

The first new piece of machinery purchased and installed at Rusken Conyers was a Bobst FFG 8.20 Discovery flexo folder-gluer. It was joined by the first machine moved from E. Smith Box, a Martin 1228 fourcolor flexo folder-gluer with diecut section, on which Bobst performed some upgrades to get it ready for action. Next came a Martin DRO diecutter, followed by a McKinley diecutter, a Jumbo printer slotter, and finally, two folder-gluers, one a J&L and the other a Bobst Pacific, along with the requisite stitchers, slotters and strappers. Bailey and his team removed from E. Smith Box what conveyors that could be re-used, taking care not to affect the plant's operations and service to its customers during the transition. As the move progressed, Rusken partnered with ACS Conveyor on new conveyor and Rustburg, Va. based SeeMotionUSA to help with the installation of Rusken Conyers' main line, including an automated strapping section.

While no converting equipment was moved from Mullen & Company in Canton, its book of business was, as was some tooling and office equipment. The company's Amtech operating system was coordinated with the operations at E. Smith and Conyers.

CSC owns, operates and maintains the two BHS corrugators; a 2001 vintage singlewall machine produces B-, C- and E-flute and a 2011 vintage doublewall machine produces BC and EB flute. Not including existing CSC employees operating the two corrugators running two shifts, Rusken has 70 employees in its newly consolidated facilities. Only a few new hires to the maintenance team were needed. All other machine operators





and office staff, including the customer service team, remains intact, as does the management team that continues to operate E. Smith Box. Steve Ingram is the General Manager at Rusken Conyers.

"There were a lot of details involved in fulfilling an order when half our machines and tooling were in one place and the other half were in another, but our team pulled together and got the job done," says Andy Bell, Sales and Marketing Project Manager at Rusken Packaging, of the year-long consolidation project. "Logistically, it was a huge challenge but we didn't

miss a beat. We didn't sacrifice any capacity and made it a point to maintain communications with our customers throughout."

Rusken Conyers is currently running one shift but is already "experimenting" with running a second. The company's customers in the automotive, food, beverage, and manufacturing segments have been growing concurrently; its e-commerce has been booming, partially due to the high-volume prowess of the Bobst Discovery and to a lesser degree, the two Martin machines.

"We don't need any additional



Two 110-inch BHS corrugators owned and operated by Corrugated Supplies Company provide Rusken Convers with an ample supply of container board.

Rusken Conyers is now well invested, well equipped and ready to continue servicing its customers in and around Atlanta.



machinery now. We're in this building, we have everything we need and we want to see how much we can grow here," says Bell. "Our focus now is on one-box setups, customization, reducing setup times, and other 'internal optimization' initiatives."

Rusken Conyers is now well invested, well equipped and ready to continue servicing its customers in and around Atlanta with the highest quality and service and as part of its ongoing growth initiative, Rusken Packaging purchased a warehouse in Charlotte, N.C., its first facility in that state, from which it will begin growing its footprint. Can some BHS corrugators operated by CSC and an acquisition or two by Rusken be far behind?



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RETROFITS AND REBUILDS: LOWER COST FIXES TO BIG TICKET PROBLEMS

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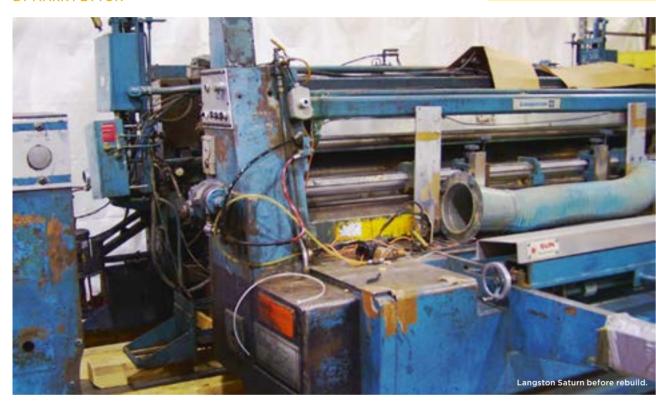
AUTOMATION ABOUT

KEEPING MACHINES

IN GOOD WORKING

ORDER.

BY MARK PEYTON



ne of the most common financial challenges that box plants face is the cost of new equipment. Even after an unprecedented period of demand around shipping and packaging due to the COVID-19 pandemic, the financial uncertainty is still looming and that can make investing in new equipment an unwelcome expense.

However, the other side of the coin is the ongoing expenses associated with aging machinery. To avoid new capital equipment spending, many corrugated facilities are using machines that are decades old. As parts wear out and technologies, controls, electrical,

and mechanical components become obsolete, the risk of continuing to rely on aging equipment poses a different threat: catastrophic failure that can suddenly and unexpectedly halt production and destroy margins.

But there is a middle option that splits the difference: rebuilds and retrofits.

Rather than scrapping the existing machine and buying a new one for millions of dollars, or wishing for decades-old equipment to hold out beyond its expiration, swapping out the parts that are damaged and deteriorating with normal use can be done so at a fraction of the cost of buying new. Rebuilding and

retrofitting equipment is akin to replacing old wiring or copper pipes in your home instead of tearing the whole house down and rebuilding it. Similarly, upgrading parts and components can extend the life of your machines and even improve your output and margins. Best of all. when done correctly, this can inspire confidence in the quality of your production and the reliability of the existing equipment for years to come.

When looking to optimize your equipment for greater productivity and efficiency, there are several common opportunities whereby retrofits and rebuilds can make a big impact:

Controls

While all of the mechanical equipment may be in good working order, there is nothing that becomes obsolete more quickly than a computer control system. Even a machine that is only 10 years old may have some serious challenges with the age and usability of its controls. One upgrade option is SUN's SunSet controls which offers a touch screen interface for quick and easy machine setup. Plus, crucially, it stores all of the old information from the previous controls, meaning it can seamlessly continue to run repeat jobs. With the simplicity of the new controls, more orders can be processed per shift, reducing setup time and waste while maximizing margins. Best of all, no custom hardware is required.

Lead Edge Feeders

A reliable feeder is a key factor in accuracy and registration, particularly at high speeds. Aging machines often have more frequent jams and need increasing amounts of oversight to keep them running smoothly. It is easy to assume that frequent jams mean that a machine is on its last legs, but a new feeder can retrofit to the existing machine and change the output game instantly. Improving precision and feed accuracy, offering optimal control

and a simple user interface, this is a simple and cost-effective solution to keep older machines running smoothly.

Anvil Trimmers

Anvil trimmers are a crucial component of successful machines. Equipment that still uses older anvil trimmers often lack the necessary precision and consistency of modern trimmers. That's why SUN engineered its Microgrind Die Cut Accuracy System. Anvil trimmers are often available to retrofit on most global manufacturer models, and SUN's particular system uses a tungsten carbide grinding roll to grind the anvil flat and true, allowing the surface to be treated in micro-amounts automatically with grinding precision every 10,000 impressions without the need for operator intervention.

Overall, there are a number of ways to enhance the life of existing equipment. In addition to the abovementioned, users can also add a more efficient and modern vacuum transfer system, upgrade register devices and increase print quality with dwell units.

Machine Rebuilds

In some instances though, corrugated plants may wish to completely rebuild their favorite workhorse machines to get them back to OEM specifications. Whether the rebuild is in-field or in-house, a tune-up or a full-scale rebuild, programs are available that fit various budgets and converting needs. Our customers have seen significant returns on the reNEW® of Langston®, Saturn, United, Ward, Koppers, Staley and Titan machinery among others.

Rebuilds and retrofits will not replace the need of ever buying a new machine again but it's certainly a good place to start. Before investing countless hours and money, speak to your vendors and have your current equipment evaluated. Sometimes the swap of a control system or simple tune-up can make all the difference.



Mark Peyton is the Director of Aftermarket at SUN Automation Group. He brings decades of industry experience

and expertise to SUN where he has held many customer-focused positions. Prior to his 20-year career with SUN, he worked for Langston and United. He can be reached at mpeyton@sunautomation.com or 410-472-2900.





GREEN BAY MILL BEGINS PRODUCTION

"THIS IS THE SINGLE BIGGEST PROJECT IN OUR COMPANY'S HISTORY," SAID WILL KRESS, CHAIRMAN AND CEO.



wo and a half years after breaking ground, the first reel of paper was produced at Green Bay Packaging Inc.'s new paper mill in Green Bay, Wis. The successful startup of the PM4 production line in March is the first step to reaching full production capacity and represents the first new paper mill built in Wisconsin in over 30 years.

"These are exciting times at
Green Bay Packaging as we ramp
up production on our new paper
machine. This is the single biggest
project in our company's history,
and It certainly would not have been
possible without the tireless efforts
of our internal people and our many
partners and suppliers working
together to turn this dream into reality.
Not to be overlooked are the many
great customers we have, without

whom this project would not have been necessary or feasible," says Will Kress, Chairman and CEO of Green Bay Packaging.

Green Bay Packaging partnered with local companies to design and construct the facility. Neenah-based Miron Construction served as the general contractor. At the height of the project, there were over 1,150 workers on site daily. Through the end of February 2021, over 2.4 million labor hours had been worked to complete the project.

Doubling Capacity

Voith Paper was chosen as the fullline equipment supplier, reportedly the first time in the history of the U.S. that a single company was awarded the contract to supply a complete production line for the paper industry. Voith Paper's North American headquarters are located in Appleton, Wis. Green Bay Packaging's partnership with Voith includes cutting-edge papermaking and fiber recycling technology.

The scope of supply of Project
WolfPack includes a BlueLine stock
preparation line including the wet
end process, the XcelLine paper
machine, a VariFlex Performance
winder and reject handling system.
The supplied effluent treatment plant
for wastewater treatment rounds
off the scope of supply. The overall
package includes a multi-year roll and
clothing servicing agreement for all
sections of the paper machine. Voith
also supplied the MCS, DCS and QCS
automation solutions.

PM4 has a wire width of 331" (8,400 mm) and a design speed of 3,937 fpm (1,200 m/min). Green Bay Packaging will use the facility to

produce testliner at basis weights between 18 and 56 lb/1000ft² (88 and 273 g/m²). "Thanks to the new facility, we can more than double our production capacity at the Green Bay site," says Matt Szymanski, Vice President of Mill Operations.

project, there were

over 1,150 workers

on site daily.

Voith Paper was chosen as the full-line equipment supplier, reportedly the first time in the history of the U.S. that a single company was awarded the contract to supply a complete production line for the paper industry.

Only recovered paper is used as feedstock. Voith equipped the BlueLine stock preparation line with technology that minimizes fiber loss. In addition, the highly purified fiber suspension is important for minimizing web breaks during paper production and thus improving the efficiency of the system. Through its BlueLine stock preparation line and XcelLine paper machine, Voith has created the basis for PM4 to achieve resourceconserving paper production. An effluent treatment plant also helps reduce water consumption and protects the environment.

Green Bay Packaging and Voith are longstanding partners. "Voith's strong service organization in North America and the mill's local proximity to Voith's U.S. headquarters in Appleton were also factors that favored the extensive collaboration on this project," says Szymanski.

Since the project was implemented by a single vendor within the scope of a full-line supplier approach, there were no interface problems. "At all points during the course of the project, we were confident that continuity between all operational segments was being achieved. It was a smooth process to integrate the many components to this mill. We had one supplier to call and Voith pulled this together very effectively," says Jonathon Gates, Project Manager at Green Bay Packaging.

Johannes Rimpf, who accompanied the construction of the facility in his capacity as Voith Project Manager, adds, "Green Bay Packaging has been given a plant from a single source that is nevertheless precisely tailored to the customer's requirements." The accurate matching of all components to one another also ensures optimum plant performance.

Local Impact

The \$500+ million investment has had a profound, positive impact on Northeast Wisconsin's economy and the environment. The construction and startup of the mill will preserve more than 1,100 Green Bay Packaging jobs across Brown County and over 1,500 jobs in the state of Wisconsin. This investment positions the company to continue to grow its Wisconsin workforce, while significantly increasing production

Green Bay Packaging successfully started operating its new PM4 production line on March 11, 2021







The mill will produce testliner at basis weights between 18 and 56lb per 1000ft².

capacity and product quality. In addition, the new mill will benefit the entire regional supply chain while operating as one of the most environmentally sustainable paper mills in the world.

REBAR

"The team, led by Matt Szymanski, has done an outstanding job bringing this project in on-time. This complex and intense project will play a significant role in the future of Green Bay Packaging," says Bryan Hollenbach, Executive Vice President of Green Bay Packaging.

"Every member of the Green Bay Packaging Mill team worked tirelessly over the past several years to bring this vision to reality," adds Szymanski. "I am very proud of our team and the partnerships we forged during this project. The chemistry that was developed allowed us to meet our startup schedule in light of a global pandemic. Voith, Miron, and our other major equipment suppliers have proven to be great partners that were committed to the success of this project, delivering a world-class paper mill."

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U.S. DISPLAY GROUP EXPANDS FOR A COAST-TO-COAST DIGITAL FOOTPRINT

BY REBECCA RENDON

.S. Display Group (USDG) has its sights set on expanding its digital printing footprint from coast to coast in the United States. CEO Dennis Mehiel and President Greg Moore saw a need for a West Coast presence to introduce digital printing; aside from their reputation as innovators in displays and signage, the company is also known for its method of digital printing and its 'one-stop-shop versatility' service offering which also includes fulfillment, assembly, kitting, packout and more.

USDG's history is complex, with the original company founded in 1984 as Eagle Displays, in Tullahoma, Tenn. The business was sold to LINPAC, whose facilities in the U.S. consisted of seven converting plants and a recycled paper mill. Several years later, the Mehiel family purchased all of LINPAC's paper business and U.S. Corrugated and U.S. Display Group were born. With additional acquisitions over the next few years, USDG is now one of the largest independently owned corrugated companies in the country.

Coast to Coast Growth

In early 2020, Mehiel and Moore were seeking to acquire a new business and expand their digital printing footprint to the West Coast, mirroring what they had accomplished at the Tullahoma facility.

In August 2020, the Group acquired General Container Corp., a display sheet plant in Buena Park, Calif., with the intention of building from its existing sales book and relocating the plant to a much larger facility in Corona, Calif. This acquisition has made U.S. Display





Group one of the few companies with a digital footprint across the United

Digital Printing on the West Coast

Mehiel and USDG are no strangers to digital printing. Having purchased three digital printers within the past three and a half years, they are reported to be one of Barberán's largest customers in North America.

The Group recently purchased a second Barberán Jetmaster 1750 digital printer for the new West Coast operation in Corona. The first Barberán Jetmaster 1750 is currently installed at the Tullahoma facility and the other Barberán printer was installed at US Corrugated in 2018, in Cerritos, Calif.

"Digital printing for the packaging industry is an innovative technology and application, unlike analog flexographic printing," said Carlos Ponce, West Coast Operations Manager for USDG, explaining the increased demand for digital printing.

"Technology seems to move at the speed of light these days. In the packaging industry, we must continue to drive innovation in order to stay one step ahead of technology.

"Digital printing is revolutionizing the game in speed to market. We are now able to convert real-time events into real-time packaging. With the ability to livestream, whatever happened yesterday quickly becomes a faint memory. You have to be able to respond immediately," said Ponce. "Who would have imagined that technology could allow corrugated box manufacturers to print and convert so quickly? We can create a floor display, showing the Super Bowl Champions before the fans exit the stadium or create a life-size digitally printed standee of an Olympic gold medalist for a retail store that same evening."

The group recently

purchased a second Barberán Jetmaster

1750 digital printer

for its new West

Coast operation.





Why Barberán?

Single pass digital printers are known for allowing flexibility and small runs of different substrates, with options to customize the material and the look. "Single pass digital printing is appealing to customers, because little to no time is lost in production and it's proven that it can be a more cost-effective way to print. Web-fed digital printing brings a lot of value if you're printing high volumes, but sheetfed presses allow you to customize and provides the customer with increased flexibility and versatility," said Ponce.

When asked why USDG chose to purchase another Barberán 1750, Ponce explained that the decision was largely based on the success the company has had with the press at the Tullahoma facility. "Our national brands, like 3M, Monster and Flex Seal, have been pleased with the speed to market and quality from the Barberán 1750 press, so they've come to expect that from us," added Ponce. He noted that the investment in the additional Barberán 1750 press is a long-term investment for the group and has the ability to be upgraded and expanded to an 1860 press, further increasing its print size capabilities.

USDG takes pride in partnering with its customers and educating them on which print method is going to best achieve what they're seeking, in the most cost-effective manner. "Larger floor displays are well suited for digital printing because of their

size. Consumers are not going to pick up a floor display and inspect it for detail, like they would with smaller packaging sizes. In turn, customers do not need to pay for expensive, super high-quality offset printing for a floor display that people will be 3-6 ft. away from. Digital flatbed printing is a great solution for this and allows customers

to free up some of their marketing

budget and try new variations for

different markets," said Ponce.

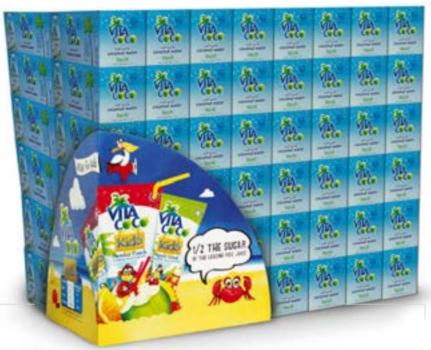
Innovators of Technology

As part of the company's initiative to stay at the forefront of innovation, they believe that their expanded digital footprint and methods of print, along with their multitude of service offerings, will keep them ahead of the technology curve. "Technology cannot supersede packaging. We need to be the ones driving the technology, not responding to it. It's imperative that we provide our customers with new and innovative ways to capture the consumer's attention through packaging and brand recognition," said Ponce.

Progress in Corona, CA

USDG presents its customers with a 'one-stop-shop,' versatile approach, offering flexo high graphics, litho label and digital print solutions. The new West Coast facility will house numerous machines in addition to the Barberán printer. Other machines to





be installed at the Corona facility will include an Automatan EM litho label laminator, a United six-color UV rotary diecutter, a Martin two-color high-speed casemaker, a ZH Quest 2800 specialty gluer and several clamshell and flatbed diecutters from Summit, Cahue and Young Shin. By April, the plant expects to have 65% of the machines up and running, with all equipment installed by mid Fall of 2021.

The Corona facility is mirroring the manufacturing footprint at USDG's Tullahoma plant. Logistics and order routing will be based on geographical location. Ponce reports that fulfillment, assembly, pack-out and kitting will make up roughly 25% of business at the Corona location, which they expect to increase to nearly 50% by 2022. Ponce expects the digital business will grow with time and may expand into the folding carton markets as technology develops and customers are educated on its potential. ■







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TROUBLESHOOTING BOARD DEEFECTS

TROUBLESHOOTING BOARD DEFECTS

FOOD PACKAGING COMPLIANCE

AN OVERVIEW OF THE REGULATIONS AND REQUIREMENTS

BY JOHN FITZGERALD HARPERLOVE

ood compliant packaging comprises a significant segment of the corrugated box industry, yet many corrugated manufacturers are not fully aware of the FDA requirements that govern the selection and use of raw materials for this segment. This article will provide a basic overview of the regulations that apply to indirect

ingredients that are intended for incidental or indirect exposure to the foodstuffs that they surround.

The specific regulation governing these ingredients is 21 CFR 175.105, commonly known as the "indirect food contact" regulation. It applies to adhesives and adhesive additives. Inks and OPVs, while similar, do not fall under this regulation.

TROUBLE SHOOTING

BOARD DEFECTS

The indirect food contact regulation is, for the most part, a compositional regulation. If all the individual ingredients of an adhesive mixture (usually identified by either chemical name or CAS number) are on the approved list within the regulation, then the mixture itself is deemed compliant. There are occasional qualifiers for usage which

If all the individual ingredients of an adhesive mixture are on the approved list within the regulation, then the mixture itself is deemed compliant.

may limit either the total amount of an ingredient or specify the functional use of the ingredient within the formula.

Upon request, the manufacturer, marketer, or distributor of a chemical mixture shall provide documentation to a user indicating compliance with either the above statute or one of the other direct food contact statements (e.g., 21 CFR 176.170, 21 CFR 176.180). The manufacturer's documentation is a definitive statement of suitability in a specific use, such as a glue lap adhesive or as an ingredient in the starch used to make a corrugated box. Suitability is not dependent on any

process variables or conditions (e.g., application rate). The suitability for a particular use, if stated, is absolute.

The documentation can be included in the regulatory section of a GHS-Compliant Safety Data Sheet. However, it is important to note that this notification is not required to be included in the Safety Data Sheet. Many chemical suppliers have created separate Food Safety Compliance Statements that list food contact compliances for which a chemical mixture is approved.

An alternative approach is available for new chemistries which are not on the compositional list within 21 CFR 175.105. This approach involves complex analysis of extractive studies to determine whether a chemical substance, subject to predetermined loadings or usage rates, will migrate and create a direct risk of food contact. Because the testing and subsequent commercial use of a given chemical substance is subject to the loading and usage limitations, this can be thought of as a conditional FDA approval, with the user (e.g., the corrugated manufacturer) assuming complete responsibility for the mixing and dosing of the chemical mixture. The user must therefore ensure their process does not exceed the "no

migratory effects" limits. While the manufacturer, marketer or distributor of the chemical mixture should clearly state the use limitations that allow the chemistry to be used in a food packaging application, it is the responsibility of the user (e.g., corrugated manufacturer) to ask for the appropriate FDA Food Contact Statement or seek that information's inclusion on the product Safety Data sheet. In some cases, special documentation tracing the product's use may be required.

HarperLove includes the compliance statement for 21 CFR 175.105 in section 15 of the Safety Data Sheet for most of its products. Separate FDA certification letters of compliance are available from a HarperLove Sales or Technical Service Representative.



John Fitzgerald is an R&D Chemist at HarperLove. He has over 30 years' experience in packaging and industrial adhesives, including over 25 years as a

formulation chemist serving in both product development and technical service roles.

A2 SENVICATIO TODAY RAVIOLESCE

Many chemical suppliers have created separate Food Safety Compliance Statements that list food contact compliances for which a chemical mixture is approved.

See what happens.

Wrong facts and the problems they cause.



A famous author once said: "A lie will go round the world while truth is pulling its boots on." It is the same with investments: What seemed to be good value at the beginning will often be considerably more expensive in the long run.

How is it possible to get high performance for low cost? It isn't. The effort needed to be the best will always be high. However, in the long term, the best quality will always give the best results. Anyone who compares all the facts for the life cycle of an investment will very quickly realise this. And will be happy that this truth is proven in the return on in vestment.



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TAPPI Calendar of Events

SuperCorrExpo®
Service Talks
May 20, 2021 1:00 PM EST

TAPPI/AICC SuperCorrExpo® August 8-12, 2021 www.supercorrexpo.org

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Appointed Members:

Greg ArvanigianPresident Arvco Container Corporation

Manager, Engineering & Capital Purchasing
International Paper

Michael Martin

VP Engineering Services WestRock

Josh Reich

Sales & Customer Service Manager Greif, Inc

c1 D

Mill Division Technical Manager Pratt Industries

Elected Members:

Greg Jones (Supplier Advisory Chair) Executive Vice President SUN Automation

Stephen Burnett (Fiscotec Chair) Technical Services Manager Atlantic Packaging Paper Mills

John Semenske (Corbotec Chair) Midwest Regional Sales Manager for Corrugated BW Papersystems

Tom Staa

Corporate Quality Manager
Advance Packaging Corporation

Mike Kohler

Vice President Sales Kohler Coating

Lena Sharesky (Young Professional Liaison)
Sales Representative
Packaging Corporation of America

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TAPPI Corrugated Packaging Division Account Manager Kristi Ledbetter



TAPPI CORRUGATED PACKAGING DIVISION

From AI to Digital Printing to Pandemic Positives: Hear All About it at SuperCorrExpo® 2021

TAPPI Panels and Sessions feature industry experts on timely topics

ive years, and one very long pandemic later, TAPPI/AICC's SuperCorrExpo® (SCE) 2021 is almost here – August 8 – 12 at the Orange County Convention Center (OCCC) in Orlando, Fla., USA.

There's a lot in store for attendees, especially as SCE 2021 represents the first industry-wide gathering in more than a year. There are eight exclusive relationship building events, beginning with the popular Sunday, August 8th Golf Tournament and continuing through a number of receptions and special events, including a "magical" evening gala at Universal's Islands of Adventure providing exclusive access to SCE attendees and their families.

Long known as the most powerful global hub of working corrugated machinery in the Western Hemisphere representing leading names in the industry, SCE 2021 also offers timely technical education – all under one roof. TAPPI recently spoke with moderators from some its scheduled panels and sessions about what attendees can expect to learn:

Session Title: Digital Printing

Moderator: Pete Synder, National Account Manager, HarperLove



Q: What will be the primary focus of this session?

A: Providing a forum to educate our audience about the science, technology, and machinery available for high quality digital printing on corrugated board.

Snyder

Q: What was your thought process in choosing

your panelists?

A: Our goal is to deliver the best and most timely information by tapping into the expertise of the best digital printing suppliers around.

Q: Please explain how they are uniquely prepared to discuss this issue.

A: The panelists chosen are industry veterans who represent companies that manufacture a wide range of digital printers for the packaging market. They will provide information about the digital printing process in general, as well as specifics about the equipment they represent.

Q: Why is this topic important considering today's production environment?

A: The value and contribution of digital printing is hitting its stride in the corrugating industry. As we move into the future, the options that it provides will continue to grow.

Q: How will attending your session better prepare the audience to meet their daily work challenges?

A: If a box plant is interested in learning about digital printing, this is the forum to attend. There will be an opportunity to learn which specific suppliers are servicing the market and the technology they represent. Plus, there is a Q&A session which will help get their specific questions answered, the locations of the booths they should visit at SCE, and the names of the individuals they should speak with to continue the conversation.

Session Title: Digital Roundtable with Converters Moderator: Jim Wegemer, Director National Accounts, INX International Ink Co.



Q: What will be the primary focus of this session?

A: To share real-life experiences of current corrugated substrates digital printers to help improve their knowledge and understanding of the challenges of this technology solution.

Wegemer

Q: What was your thought process in choosing your panelists?

A: We wanted to have a cross-section of experienced digital printers representing a mix of digital equipment in use today.

Q: Please explain how they are uniquely prepared to discuss this issue.

A: Each of the panelists represents a company that is actively engaged in the digital printing process, and actively involved in the digital aspect of the business.

Q: Why is this topic important in light of today's production environment?

A: Digital is established in corrugated printing, but it is a print solution that is in a constant state of evolution. Digital offers a number of benefits over conventional printing within certain areas of production. It is important when looking at digital as a production solution that you are aware of current expectations, experiences, and capabilities.

Q: How will attending your session better prepare the audience to meet their daily work challenges?

A: For those interested in exploring digital print for corrugated, this session will provide an opportunity to listen and learn from those who are already doing it today. In addition, the Q&A component will provide attendees with the opportunity to probe specific interests with current printers. They will leave with a better understanding of the status of digital print, and what is being accomplished every day.



TAPPI CORRUGATED PACKAGING DIVISION

Session Title: Positive Lessons Learned Post-COVID Moderator: John Semenske, Regional Sales Manager, BW Papersystems



Q: What will be the primary focus of this session?

A: To identify positive lessons learned from COVID, specific to our Industry, such as the areas of our business that have been strengthened.

Semenske

Q: What was your thought process in choosing your panelists?

A: The panelists were selected to represent four unique areas of our industry: business management, production, sales and engineering.

Q: Please explain how they are uniquely prepared to discuss this issue

A: Each panelist will provide a 10 to 15 minute presentation on the impact COVID had on their business. The focus will be on what we have learned and what positive industry changes we can see. This will be followed by a roundtable discussion and an opportunity to ask questions.

Q: Why is this topic important in light of today's production environment?

A: There have been many changes in our business out of necessity due to the pandemic. We have learned a lot about ourselves and our production teams. Some of the things we observed and learned have made positive impacts on our businesses. We need to identify those things and use them to improve the production environment.

Q: How will attending your session better prepare the audience to meet their daily work challenges?

A: Based on the expertise of industry leaders on how COVID has changed their business, attendees of this session will learn how each of us can improve and become more productive. And, because we're focusing on the positives, they will also gain some thought-provoking ideas on how they can improve and how industry can be stronger post-COVID.

Session Title: Artificial Intelligence – Cyber Security Moderator: Chris Harris, Process Specialist and CEO, WPR Services

Q: What will be the primary focus of this session?

A: Artificial Intelligence (AI) and how it can securely improve the manufacturing process.



Harris

Q: What was your thought process in choosing your panelists?

A: Gathering key experts who can speak on this topic from the component level. Components that each machine builder in our industry and maintenance department is familiar with and can be vulnerable in today's Industry 4.0 landscape.

Q: Please explain how they are uniquely prepared to discuss this issue.

A: By focusing on backgrounds and skill sets, the experts planned include a former VP of Products at GE who also has experience as a product manager at Microsoft. Not only do these skills align with a generalized AI topic, it's an ideal segue to security. Additional panel experts include a VP of software and control at Rockwell Automation – which has one of the most widely used PLC and SCADA devices used in our industry.

Q: Why is this topic important in light of today's production

A Security should be a primary concern as it affects every department. With the influx of so many new technologies that have access to the internet, and the popularity of remote access to computers, we need to know how to safely implement advancements, monitor them and protect valuable assets.

Q: How will attending your session better prepare the audience to meet their daily work challenges?

A: By making them think and consider security in everything they do, and as a facility is upgraded with new technologies. They will gain a solid understanding of new technologies that can advance manufacturing and dive deeper into the importance of security.

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TAPPI and AICC are working together with the Orange County Convention Center (OCCC) to ensure enhanced healthy-meeting measures are in place for SuperCorrExpo® this August.

Top Star Award

Along with the City of Orlando, OCCC has implemented new cleanliness measures in accordance with policy recommendations from the Centers for Disease Control and Prevention (CDC). In collaboration with Visit Orlando, OCCC offers a first-of-its-kind medical concierge program with Orlando Health and along with Orlando International Airport, OCCC has achieved the Global Biorisk Advisory Council's (GBAC) Star Accreditation.

Visit supercorrexpo.org for program details, special events listings and to register.



TAPPI CORRUGATED PACKAGING DIVISION

TAPPI CORRUGATED PACKAGING DIVISION

Perspectives from the SCE 2021 Sales Office

With so much of the global supply chain and economy on a roller coaster, TAPPI and AICC wanted to share a "behindthe-scenes" conversation with SuperCorrExpo Salesperson Linda Cohen who has expressed both surprise and delight about the current state of this year's exhibit space.

SuperCorrExpo is happening!

"The feedback I am hearing is that exhibitors can't wait to get to this show. It is the first corrugated event since the pandemic began wreaking havoc globally. With online shopping skyrocketing during Covid, the industry has done well. And, since all shows in 2020 were canceled, many new presses and equipment had to be released online. Now, companies finally have the chance to meet with clients and talk about all their new products and innovations - live and inperson! Conversely, our attendees have also done well and want to learn more about upgrades and new products for their plants.

"That's why SuperCorr will showcase more than 250 exhibitors



Cohen

(and counting) on the show floor with working machinery, innovative giveaways, exciting entertainment, and food and beverage in booths. Also on the show floor, we will feature four keynote presentations, the 2021 Box Manufacturing Olympics, SuperCorrExpo Café, and so much more. TAPPI and AICC have designed all of it to maximize focus on the products and services of our exhibitors, including the outstanding technical program

offerings that do not conflict with trade show floor hours.

"This year's event, more so than ever, highlights relationship building - key to connecting buyers and sellers. On the agenda is return of the popular Corrugated Classic Golf Tournament, a pre-show Welcome Party, daily events on the show floor, and a special Gala at Universal's Islands of Adventure, where this private, attendee-only party will have us all raising a mug of special beer - safely - together!"





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Albany International Alignment Services of North America

Alliance Machine Systems International, LLC American Baler

American Corrugated Machine (ACM)

Amtech Software

Anilox Roll Cleaning Systems, Inc. (ARCS)

Apex International ARC International Arco Murray

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Flora/Shenzhen Runtianzhi Digital Equipment

Fluke Reliability Fosber America/Tiruna

Freeman Manufacturing & Supply Co.

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HAECO

Haire Group Hansen-Rice, Inc.

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SUN Automation Group

Svn-Tech Ltd. Taiwan Endurance Co. Ltd.

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TRESU

Tribco Inc. True North Graphics, Inc.

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NEW DIECUTTER

ALPHA PACKAGING DELIVERS CUSTOMIZED SOLUTIONS

WITH A NEW BAYSEK C-170 FULLY AUTOMATIC ROTARY ANVIL FLATBED DIECUTTER



The diecutter is providing labor saving efficiencies for diecut corrugated packaging and even foam.

Ipha Packaging, Inc. was founded in 1987 and is the largest independent corrugated plant in Arkansas, according to President Mike Stec. The 150,000-sq-ft facility in Greenwood sits on 14½ acres and converts about 23 million sq ft of board per month. The company has grown considerably since its founding. It was started in a design room 34 years ago and relocated to a 20,000-sq-ft building in 1988 and then a 30,000-sq-ft facility in 1989. It was moved to its current facility in 1992 and has

expanded several times, adding warehouses in Missouri, Louisiana, Fort Smith and Springdale, Ark.

The manufacturing floor is equipped with state-of-the-art machinery, capable of creating virtually any style container, including triplewall, and plastic corrugated. There is even a foam plant within the box plant, which pairs well with in-house kitting. There is also custom made equipment for special projects.

Stec describes Alpha Packaging as "service intensive," providing customers with vendor management

inventory requirements and design opportunities.

Over the years, investments in machinery, staffing and design capabilities have ensured high customer retention and satisfaction.

One of the newer purchases is a C-170 fully automatic rotary anvil flatbed diecutter from Baysek Machines. The diecutter can cut, strip, count and stack up to 60,000 pieces per hour or 1800 sheets per hour.

Stec says he contacted Baysek in 2018 and knew the machine would fit perfectly into his operations as labor The C-170 produces nick-free, multiple-out diecuts with one operator. It is ideal for partitions, bakery and pizza circles, and food and pharmaceutical boxes.

became more difficult to find. "We were looking for ways to reduce the number of hand touches required in stripping, stacking of interior diecut packaging and even preparing pizza boxes to cycle through the shrink tunnel," he says.

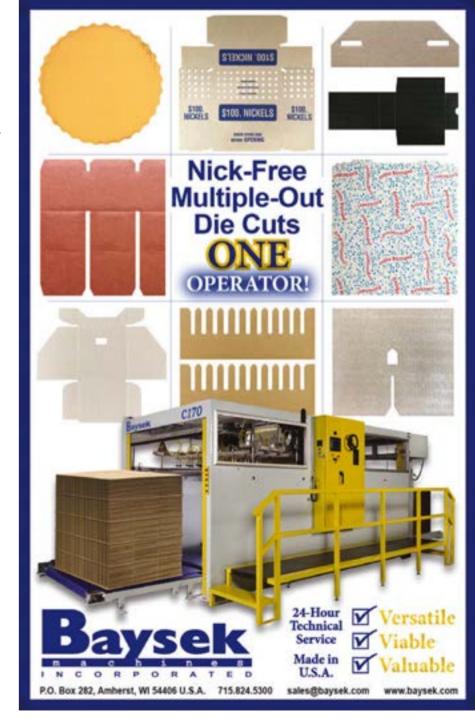
The C-170 produces nick-free, multiple-out diecuts with one operator. It is ideal for partitions, bakery and pizza circles, and food and pharmaceutical boxes. It can handle sheet sizes from 20- x 20-inch up to 55- x 67-inch and flute thicknesses from F- to B/C-doublewall.

While the machine does not run as fast as Alpha Packaging's other rotary diecutters in the plant, he says, "It can run a larger multiple out because you don't have to worry about stacker issues. The Baysek is a classic sheet plant piece of equipment that gives your plant capabilities which competition does not have."

Alpha is also using the C-170 to diecut foam. "I believe we were Baysek's first customer to use the machine to diecut foam products. We put a diverter line in to handle the trimmings of plastic corrugated, foam and other products," he says.

Stec characterizes the experience with Baysek as "very professional, with an efficient installation process, basic training and personal service after the sale."

Tim Engle, Baysek National Sales Manager, adds, "Mike and his team were very professional and fun to work with during the sales and installation process. We look forward to continuing to support Alpha Packaging with excellent after sales care."



ROTARY DIECUTTING CORRUGATED - THE PITCH MATTERS

QUALITY, ACCURACY, PERFORMANCE AND A COMPLACENT SURRENDER.

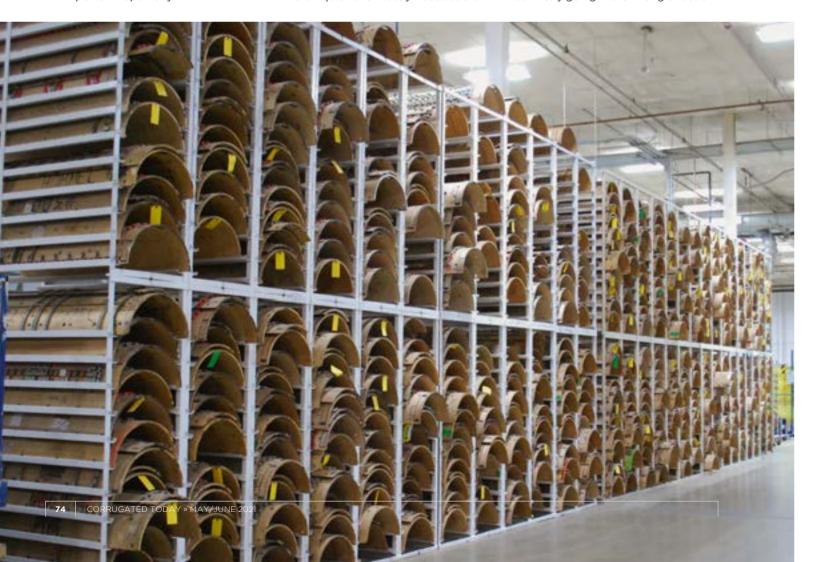
BY KEVIN KOELSCH

t amazes me how quickly a company that spent millions of dollars on a rotary machine that promises high quality, diecut boxes and high throughput will bail out prematurely on the process discipline and solid engineering it takes to perform optimally.

The first mistake almost all corrugated box producers make is concluding the rotary diecutting process is just a quick way to get high volume, saleable board feet out the door. For one thing, when it is done poorly, it will almost certainly be less than quick and mostly not saleable.

The second mistake is thinking every problem can be solved by doing something with the cutting die.

Granted, the cutting die is definitely one part of the system that is easily altered but using this as an excuse for not managing the entire process is definitely going in the wrong direction.





If either of these scenarios sound familiar, it's very possible you have unnecessarily surrendered to less than desirable outcomes under the false pretense that this is just the way it is and making the best of it is the prudent way forward. It doesn't need to be this way.

Qualify The process

There are two primary types of rotary diecutting in the converting industry.

- ON TO This is when non serrated cutting (sharp edge, no teeth) rule is used, and the knife compresses the material to be cut and the wedge force finally severs (bursts) the material with pressure ON TO a steel (or steel like) anvil.
- IN TO This is when serrated cutting rule (fine to course teeth) in the cutting die form is intended to pass through the material and IN TO a urethane anvil.

Understand The Pitch

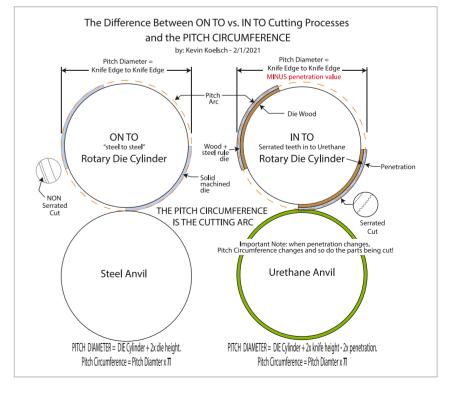
When planning a rotary die designed to cut corrugated (or anything else for that matter) the cutting process must be determined first.

The first mistake almost all corrugated box producers make is concluding the rotary diecutting process is just a quick way to get high volume, saleable board feet out the door.

ON TO or steel-to-steel cutting is generally used for solid fiber, carton work. The die is normally a machined tool where the knives and creases are etched or milled from a steel shell. This process is complex, time consuming, very accurate and costly. Only the highest volumes in repeat cartons can reasonably spread out the expense. The pitch of this tool design is precise. The pitch circumference is the diameter of the tool from knife edge to knife edge x π . Since this cutting arc is exact the dimension is also static and without changes beyond the cutting edge wearing against the steel anvil (over time) there are only tiny variables associated to accuracy related to the pitch (or rotational cutting arc).

For that reason, a discussion about steel-to-steel pitch needs no further scrutiny in this article.

IN TO rotary diecutting, on the other hand, can be riddled with variables. If this is the case, why then is this process so popular in corrugated converting? Historically, IN TO rotary diecutting is popular due to the lower relative cost to produce and the unprecedented speed at which they are made. Calculating the pitch of an IN TO rotary die is exactly the same as it is for ON TO rotary with one crucial exception. The amount of penetration the tool will require to cut through the material and into the anvil needs to be factored and is elemental in the final rotational accuracy of the parts produced. (See illustration below)

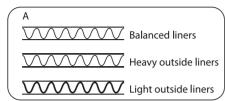


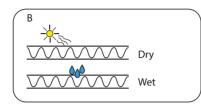
When planning a rotary die designed to cut corrugated (or anything else for that matter) the cutting process must be determined first.

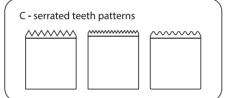
As we can see, the penetration of the soft anvil rotary cutting die is critical to the final part dimension. Not only that, but the anvil also plays an important role. Let's assume your machine has a policy to rotate anvils and keep them evenly worn or even better, your machine has an anvil grinder to smooth them out and a speed compensator to keep time with the spinning rotary die. If these factors are controlled, all we need to do is run the rotary die at the correct penetration that we designed for in the beginning and we should get accurate parts. Why does this rarely occur?

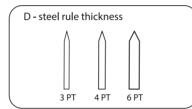
Why is an exact penetration value elusive?

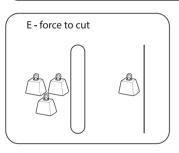
- A Corrugated paper liner construction varies. Different liner weights and starch content require different cutting values.
- **B** Moisture content of sheet stock when cutting varies. Wet corrugated is tough to cut!
- **C** Cutting rule tooth options vary. Aggressive teeth cut easier but require more penetration to pass the gullet into the anvil.
- D Cutting rule thickness (can vary). The thinner the blade, the easier it is to pass through the material. Steel rule thickness is defined in "points." Each point is .014" (.35mm). Common rotary rule is 4 point or .056" (1.42mm).
- **E** Design elements of the package or part to be cut can pose variations in required force to cut. For example, slot cut outs where two knives run parallel and close together require more force to cut than a single, isolated blade.
- F Anvil conditions change over their

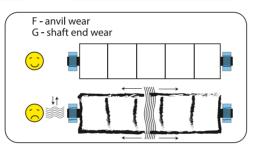


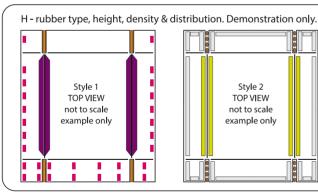


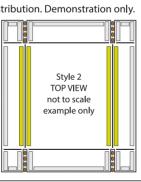


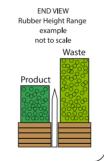












life span. As repeated cutting takes place, the anvil surface becomes more rough and potentially uneven. These surface conditions present a spongy surface that fails to support the paper being cut.

- **G** Journals and shaft bearings that are worn will vibrate and bounce each time the cutting die makes contact. These minor (or major) turbulence
- issues cause everything from miss cuts to fractures along crease lines.
- Rubber type, height, density and distribution. This varies by design and die maker. Operational best practices are far from congruent among experts. Additionally, much of this is still not automated and subject to worker skill, training and interpretation

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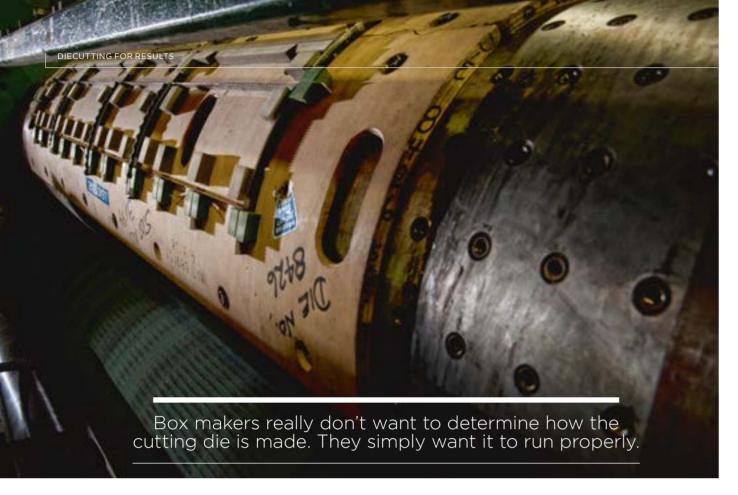
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What To Do About It?

The first step is to figure out what you're doing right and what needs to change. Now that you have a better understanding of pitch and penetration, lets define what you can control and what you can't (or find impractical to). Here is a list:

The paper that I die cut on a rotary. (3 parts):

Corrugated paper construction -Heavy liners, light weights, recycled liners, special mediums, ECT value etcetera; it seems very unlikely that any box maker would confine themselves to one corrugated paper construction. Controlling the paper goes in the "impractical to control" column. Just remember, board construction relates to cut penetration required. If your diemaker isn't taking the paper construction into account, you will face many problems including incomplete cutting, cracked crease lines, anvil wear and part inaccuracy. If you want to help, let the diemaker know what the board construction is specifically. The ECT value alone is not 'good' information.

Corrugated paper condition (hot & wet) - This may not be easy to control but it definitely can be. The moisture content and temperature of the corrugated sheets as they are staged to the rotary diecutter must be coordinated. Planning the corrugator needs to be more than the schedule and yield. You can achieve schedule, yield and cured board to diecutters if you simply insist that cured board is a priority too. If you fail to present cured board to the diecutter, you will never manage penetration, anvil wear and consistent, accurate parts.

Corrugated paper and feed direction - Feeding "soft edge" or flutes running across the diecut cylinder is a sure way to run off pitch. The penetration distinction between feeding with flutes as opposed to feeding cross flutes is monumental. There is not a set amount of penetration difference when cutting with or cross flutes as it is largely design centric but make no mistake, you will increase the penetration to cut soft edge feeds. This is compounded with premature anvil and die rubber wear, parts sticking in the die, part dimension variations and stacking handling nightmares. Figure out a way around it. This is in your

Machinery anvils & running conditions

If you want to commit to smooth and accurate running, this is the easiest way to assure that it happens. You must invest in the process upkeep and discipline around cutting with good, even anvils and with a machine that is not bouncing around. Spend the money. You can thank me later.

The cutting die build specifications

After 40 years in the rotary die making business, one thing is clear. Box makers really don't want to determine how the cutting die is made. They simply want it to run properly. This is why the industry, at least in the U.S. has not taken rotary die making internally. The variables to plan for are so abundant that it is impossible to come up with a universal specification for the cutting and creasing rule that fits every situation.













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I'm sure that an engineer and a bit of AI software could figure this out but the multitude of rule heights, styles, thicknesses etcetera would be so prolific it becomes completely impractical. And beyond that, I have seen most box makers have trouble enough trying to manage the paper and its conditions let alone designing the rotary die engineering.

Overcoming The Variables

The next generation rotary cutting die will incorporate a variety of features that best address the wide and changing variables presented. These features will include:

- Hybrid implementations of 3- and 4-point rules to specifically address penetration forces to cut. Using 3 point on internal cutouts and shapes in many cases pose no threat related to steel rule integrity yet this thinner blade reduces the force to cut significantly. The idea is to have all cutting rule, straight and curved, cut at the least amount of penetration and that cutting is uniform for both.
- Hybrid cutting rule tooth configurations and heights that operate at complimentary penetration values. The idea is to have all cutting rule, straight and curved, cut at the least amount of penetration and that cutting penetration is uniform for both.
- Ingenious rubber shapes that offer lift and separation between waste and parts that operate at very low compression resistance and conform easily to the pitch circumference without interfering with sheet transfer speed. It is too common to add high blocks of rubber to the die when it isn't performing. This practice only increases the resistance of the die to operate at pitch and definitely introduces damage to the parts produced as well as the cutting die itself.

- A collaborative approach to die designs and the arrangements of multiple out configurations that consider, speed, delivery, waste size and steel rule joining. What can we expect from an industry moving at warp speed to produce? All I can say is "haste makes waste!" What designs you choose and how you connect multiple outs is critical to the final performance.
- Incorporation of rubber types, densities, formulations and placements that are long wearing and provide consistent control and part management are keys to the die package operating at pitch. Every die should come with a rubber blueprint that defines what is where. If changes are made, the digital blueprint is updated.
- Perforation rules that are engineered and applied to meet box design requirements without introducing the negative impact related to the 'gear' tracking phenomena. Perforations are a necessary evil that must be contended with. Lowering the height, using serrated perf cuts and some specialized rubber techniques are all in play to deal with this common issue. In closing, it really depends on what type of a convertor you want to be. One that feels they are at the mercy of a constantly varying process not meant to control or one that believes that investing in process management, die engineering and discipline will rule the day.

Kevin Koelsch is a consultant and technical writer/illustrator with 40 plus years of experience in the corrugated industry. He is an IADD PEAK award recipient, a fourtime USA patent holder, an FPPA Innovator of the year award recipient, and a judge for the TAPPI/AICC SuperCorrExpo package design competition. He can be reached at koelschkevin57@amail.com



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AS SHELF-READY PACKAGING BECOMES INCREASINGLY IMPORTANT, THE NEED TO PROVIDE THE PERFECT SOLUTION TO DIFFERENTIATE THE CUSTOMER'S PRODUCT BECOMES MORE SIGNIFICANT.

n addition to clever box design, high quality printing and accurate diecutting, the specialty gluer is key to the box maker's success in this sector of the value-added market. The size and configuration of the gluer and the equipment or special devices available to mount on it will determine the size and style of box that can be converted.

Beyond improving the function of packaging by gluing, labor savings

for the customer by using pre-glued products is essential. So, in evaluating an investment in a new gluer what are the key factors to consider?

■ Ease of setup: This is a prime consideration – the minimum number of tools should be required to make a setup. Accessibility to all parts of the machine is also a major priority and space should be available between shafts to attach additional special attachments. It is also

beneficial if peripheral equipment and attachments can remain on the machine when not in use, rather than be required to be removed and re-installed when needed.

- Glue tank capacity: Should be large enough to supply additional heads.
- Feed section: Should be adjustable for other than straight forms.
- Run speed: The line speed of the machine will be affected by procedures being performed on



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the blank in the folding and gluing section. Speed is also determined by the speed of off bearing. The line must produce square bundles going into the strapper and there should be adequate space around the take-off to discard rejects and handle their removal

The technological development of specialty gluers has been significant. In the pages that follow, we highlight developments that are sure to be of interest to those considering investment in such specialist equipment.

Versatile Design

Alliance Machine Systems International's J&L specialty folder-gluer debuted 31 years ago with the primary objective of being the most versatile machine of its kind in the corrugated market. With more than 250 installations, all of those folder-gluers are still in operation today.

The early models were offered in sizes ranging from 80 inches to 130 inches in width. The J&L design was one of the first truly modular specialty folder-gluers with independent drives in each section. The early models were driven by variable frequency drives for precise speed control. This eliminated the mechanical drive train and many gearboxes in traditional designs. In 1998, the drives were upgraded to servo drive systems for even more precise speed control.

Manual-set carriers were another key feature of the machines. Having the operator move the carriages eliminated all the cross-directional, greasy lead screws and all bicycle chains required to turn the screws and drive the carriers to their proper positions. At first blush, one might wonder why automatic setup would not be preferable. Box makers who investigated the manual setup quickly realized that moving the carriers into position was 5% to 10% of the total setup time, and setting up the

tooling took 90% to 95% of the time, no matter how the carriers were positioned. They also recognized that the operator could manually set the carrier in two to three seconds, whereas the auto-set could take 30 seconds or more to move the same distance. Today, Alliance offers specialty folder-gluers in widths from 80 inches to 210 inches. Auto-setting the carriers on a 210-inch machine doesn't make much sense.

The modular design also allowed the operators to "walk into the machine" to set it up. An operator and helper can enter a module from opposite sides and work together to set the carriers and tooling. As they set up modules, they have the ability to see any interference that would crash an auto-set rail design.

Another advantage of the modular design is Alliance can add or remove modules to suit a customer's needs. If the box plant only needs to run straight-line boxes, removing two modules can provide a straight-line folder-gluer. If a customer wants to integrate third-party technology, one or more modules can be added and dedicated to that technology.

Last fall, the J&L folder-gluer surpassed its 30th anniversary. With more than 250 units in the field, it remains one of the most versatile specialty gluing platforms in the global market. Over the last few years, we've learned that our folding and gluing technology is outlasting the electronics and controls in the older machines. Recognizing this is a serious issue for our customers, we've developed the controls platform retrofit (CPR) for all older models facing obsolescence.

For converters interested in the multipiece, shelf-ready box market, Alliance provides the combination of a Tanabe Tri-feeder and a J&L Mark5 XT. Tri-feeding allows for the creation of superior structural properties while minimizing board content. The system architecture allows the two to run together inline, or each can be run and set up separately to maximize productivity. Designed to roll to the side when not in use, the tri-feeder has proven to be an attractive alternative to fixed-format, multipiece machine designs. When rolled out, it can be set up offline while the gluer continues to run another order.

Both the Tanabe and J&L product lines are backed by Alliance's dedicated worldwide service team, available 24 hours a day, seven days a week.

www.alliancellc.com





The J&L Mark5 XT Jumbo can handle them.

The Alliance jumbo Mark5™ XT specialty folder gluer handles boxes up to 210 inches.

Applications include pallet wraps and jumbo boxes.

It also is designed for specialty boxes such as lock bottoms, trays, displays, tubes, and tear tape applications.



Learn more!





New Automated Packer

Bobst is set to launch its latest breakthrough innovation for its range of folder-gluers by the end of the summer. The Speedpack packer will take automation to a new level on folder-gluers, enabling corrugated packaging manufacturers to optimize their asset's full performance potential, while preserving box quality.

"With the upcoming unveiling of Speedpack, Bobst continues to demonstrate its commitment to innovation in order to make its vision for the future of packaging production a reality," says Pierre Binggeli, Product Line Director Folder-gluers. "Automation is one of four crucial pillars, alongside, digitalization, connectivity and sustainability, to future-proof the industry and enable progress for continued success. Our vision is anchored in providing greater control across the entire workflow to support packaging manufacturers and converters to become more flexible, agile and efficient."

Speedpack brings a multitude of benefits to operators and enhances the return on investment for manufacturers and converters. Providing the highest possible number of batches per hour, it increases the folder-gluer's productivity, while

allowing for short setup times.

Folded and glued boxes are automatically counted, stacked and banded, and perfectly formed bundles are delivered, ready for palletization. The automated process eliminates the need for machine operators to bundle batches together and carry heavy loads to offline bundle strapping machines; workload is reduced and the risk of injury, including repetitive strain injury, during the packaging and strapping process is removed.

The Speedpack can handle all types of boxes, whether corrugated or litho-laminated, from straight-line, four-corner, to crash-lock bottom. This means shapes and/or surfaces with various slip factors are not an issue for this versatile peripheral.

The packer will be available on Bobst folder-gluers for corrugated board and litho-laminated, including the Expertfold 145/165 and 170-350, to the Masterfold 170-350.

Binggeli continues, "The Expertfold 145/165, in combination with Speedpack, puts the operator firmly in control of the folding and gluing process, while improving productivity and quality, and at the same time reducing errors and waste."

Designed as a modular machine, the Expertfold 145/165 can handle

a wide range of corrugated or litholaminated boxes and can be equipped with a variety of peripherals and devices to offer packaging converters versatility and enhanced performance. It delivers advanced feeding, accurate pre-breaking and a smooth, accurate folding process that minimizes fishtailing and gap variation, ensuring high throughput and exceptional finished product quality. Following a series of new efficiency-boosting features in 2020, the Expertfold 145/165 offers up to 20% setup time reduction and even greater flexibility and accuracy with corrugated board.

Additional command panels were incorporated at each stage of operation, enabling excellent control along the full line and reducing changeover times by up to 15%. The Accufeed was also upgraded last year, with the introduction of a new pneumatic locking feature for feeding ramps. In addition, the integrated blank aligner was innovated to have wider conveyors for perfect quality folding on heavy flutes. On the folding section, customers can choose larger folding belts and a heavy-duty central conveyor, and a dedicated pressing device, specially developed for doublewall board, is available.

These changes have generated setting time reduction and a perfect handling of larger or heavier range of blanks or material.

Binggeli concludes, "Speedpack brings together a large range of innovations and patented features to help create a superb, high performance folder-gluer line. Working in conjunction with Expertfold 145/165, customers will be investing in a robust, solid solution that delivers first-time right, high quality finished products and brings a new level of automation to their operations, while at the same time creating greater flexibility, accuracy, ease of use and waste reduction."



Bahmüller's Turbox gluers, which are made in Germany, are well-known in the market. In fact, many plants consider them as an 'essential column' of packaging converting when it comes to e-commerce and shelf-ready packaging.

The recent months have forced all converters to boost productivity and put some extensions in their regular machines. Almost all Turbox gluers can be retrofitted with applicators for silicone liners and tear strip tape, for example.

Bahmüller works with well-known suppliers from Europe and overseas to ensure best performance and versatility. For instance, the integration of Baumer hhs hotmelt and silicone liner applicators from Enpro inside the first folding section Dynamic Fold I module are simple and highly productive additions and can be integrated without any problems. The small applicators ensure best use of space inside the machine, without holding the folding process.

The main controls and magazine are outside the light guards and easy to remove if not required.

For some cases the same box must be fed two times through the machine. While this is not the preferred solution, it is possible to do a low volume job properly and still economically.

Some customers opt for a dedicated solution - just e-commerce products. In the past, you had to go for a full suite machine with the use of just a third of its possibilities. Bahmüller engineers made it possible to reduce the machine to an absolute minimum. The modular concept offers a short and dedicated machine, with the ability to retrofit all components to gain a fully equipped Turbox.

The Diagonal Fold Supervision (DFS) for Turbox was introduced in 2019. A set of small sensors, directly attached to the folding bridges inside the first folding section Dynamic

Fold I, ensures proper control of each box, independent from product color and machine speed. The open box is checked during production and even the smallest misfold in the diagonal folding can be detected. Tracked throughout the process, non-conformed boxes will be ejected by the single blank ejection system 'Unique Eject." The patented 'Unique Eject' and DFS are key features for a higher grade of automation.

The company also offers
Powerpacker. More than 50% of the recently sold lines are now equipped with the automatic packaging solutions. With more than 60 units installed all over the world, the fourth generation is now raised to a new level. The two versions of Powerpacker – Basic and Performance – boost the possibilities and lower the ROI threshold. Both versions will increase productivity and can enable users to keep pace with the huge demand of e-commerce packaging. www.bahmueller.de

Sheet Plant Focus

The Kolbus MultiNOVA MN400 is a perfect box gluing solution suited to all sheet plants regardless of size. It provides many advantages including quick set-time; for example, 3 point gluing/crashlock can be carried out in 15 minutes and straight-line work in five minutes.

Speeds of up to 3,000 boxes are achievable, with higher production speeds on smaller format boxes. The machine runs BC, EB doublewall and more, covering a vast array of jobs producing 500-5000+ boxes with ease. Many sheet plants have freed up larger volume machines, with the economical MultiNOVA producing multiple jobs, as a result of the fast setup times, versatility of panel sizes and run speed.

The machine has a special finished product compression system as standard, allowing the operator to feed the completed box into the system, which provides neatly pressed boxes for stacking on to a pallet.

Powerpacker automatic packaging solution







Speed adjustment enables complete control, the pressurized electric PVA glue application can be adjusted to produce various glue results, including dots and lines, this reduces overapplication and waste.

The robust, but compact MultiNOVA (13' x 8' footprint) is manufactured to high quality standards in the Houghton Regis, UK facility. Kolbus America, Inc. headquartered in Cleveland, Ohio, is a division of the global Kolbus group that produces a variety of packaging machinery, from

the Hycorr rotary diecutters, luxury packaging, to solid case making offer 24/7 maintenance and parts support for North American customers.

The MultiNOVA joins other gluing machines in the range, such as the Pro Melt PM 100 for smaller boxes and the larger format Pro Gluer PG 100. These machines provide gluing solutions to the portfolio of quick toolless box making equipment from Kolbus, including the AutoBox 300 and Boxer box making machines.

www.kolbus.com

Robust Design

Manufactured by Koenig & Bauer Duran, the Omega Magnus is designed with the end-user in mind. Featuring advanced technology, user-friendliness and versatility, the specialty corrugated gluer responds to all standard and special production requirements with Duran's ability to meet customer's special needs.

The Omega Magnus comes in size 210 and 230 and has a maximum belt speed of 300 m/min. It processes E-, B-. C-flute and doublewall up to 7mm. utilizing a servo back folding system with a single finger for 4 & 6 corner styles and a new design servo front fold system for auto bottom boxes.

It is an industrial constructed machine with over 1-inch solid steel frames. The feeder has an extendable rack gear for oversized blanks and vacuum transfer system. Equipped with belt adjustment on 10 feeder belts, the Magnus has dual feed gates with extra pile supports, ensuring accurate feeding. Pre-fold and final fold sections incorporate pneumatically controlled and independently driven upper carriers, long final fold unit, motorized adjusting folder belts, a pneumatic squaring device at the final fold for squaring auto bottom boxes, delivery and stacker sections with heavy-duty trombone unit and a downstacker which is a rear box squaring device



carrier motor control buttons on both sides of the machine, a color monitor at the feeder for surveying delivery and an additional control board at the end of delivery and remote control.

Like all Omega folder-gluers, the Magnus has a standard job setup record page on the machine screen which enables the operators to repeat the perfect setup with 100% accuracy. The Magnus is also available in a 'memory' version on which the repeat job setup can be made with automatically moving carriers.

All Omega folder-gluers are designed to meet the complete production requirements of corrugated box makers. In addition to the extensive range of machines offered, Koenig & Bauer Duran also manufactures custom made machines for individual production requirements.

www.koenig-bauer.com

New Large Format

American International Machinery, exclusive distributor of Signature folder-gluers, has developed one of the first of its kind specialty corrugated gluers designed to run large-format cartons with a turning module that will accommodate cross folding and gluing. The Signature Albatross can run at speeds up to 1100 feet per minute and features

carrier self-driving system, and a touch screen control panel. The turning module can turn large cartons 180 degrees or 90 degrees and is unlike anything that has been done in the corrugated industry.

The Albatross has the ability to run heavy corrugated product (32-60 point), corrugated board (N- to A-flute), doublewall combinations, and folding cartons including smaller boxes. Its features allow the machine to run a wide variety of cartons with longer volumes providing significant productivity gains for packaging companies by utilizing one versatile machine.

In addition to the Albatross, Signature offers the Eagle, a highly durable and versatile foldergluer capable of converting both paperboard and corrugated materials. The Eagle is engineered for easy setup and quick changeover capable of producing straight line, lock bottom and 4&6 corner cartons as well as inlet partition designs.

A few of the more popular machines in the Signature folding carton line includes the Elite, Premier, and Compact. The Elite can run straight line, lock bottom, and 4&6 corner cartons effortlessly. Known for its standard carton aligner, inline carton ejection, pneumatic carriers, and extended/dedicated

pre-break section, the Flite is a true multifunctional converting system.

The Premier is considered the most affordable in the international converting market and offers a wide variety of options including servoback fold, carton aligner, and/or inline carton ejection unit.

The Compact is a heavy-duty folder-gluer designed to take up minimal floor space and to run small straight line and lock bottom cartons for the cosmetic, pharmaceutical and vending industries.

To further enhance the versatility of the Signature line, a variety of supplemental equipment is available including: Sig-Check print inspection system, Sig-Feed pre-feeder, Sig-Pack carton packer, Beverage Plus for bottle carriers, nick breaking, and more.

The Signature line of folder-gluers, pre-feeders, and automatic carton packers is quickly growing to be the brand of choice for businesses that desire a customized machine for their individual packaging needs.

www.aim-inc.net

Diverse Portfolio

Lamina System of Boras, Sweden, offers a wide range of gluing equipment for corrugated packaging and also POS displays.

'Folder Gluer' is an excellent choice for a multitude of folding/gluing



operations and applications. It is a high-speed, high capacity, fully automatic non-stop machine for the production of standard one- or twopart boxes and even customization for three-part boxes, one-point glued boxes, three-point crash-lock boxes and four-corner boxes. The compact and modular design allows for easy access and quick setup times. The different sections can be separated easily by sliding the units on tracks for full access inside the line. The hot melt system can be combined with a PVA cold glue application which contributes to additional cost efficiency measures.

The 'Gluer' is a compact multifunctional manual fed in-line folding and gluing production line providing flexible solutions for a variety of applications such as gift boxes, rigid boxes, corrugated boxes and much more. The user-friendly touch screen display coupled with simple manual adjustments allows for quick setup times. The Gluer's modular design accompanied with pre-installed hardware and software, allows for additional units and a selection of options to complement a production line by simple 'plug & play.'

The 'Working Station' is an option to complement the 'Gluer.' Ideal for the production of two-part displays and boxes, or any other product that requires a 'mounting' phase within the production line. On completion of the glue application phase, the product is automatically delivered through to the connected Working Station using a series of vacuum belts. The product is then automatically aligned and positioned by a side guide and a pneumatic pusher system. Once the product is in position, the mounting phase is completed manually.

'Glueline' is a high-speed, high capacity, fully automatic non-stop machine for the production of

standard one-part and two-part boxes Automation Assistance and perfect for POS displays. The compact and modular design allows for easy access and quick setup times. The alignment and folding sequence system delivers consistent high precision registration, thus producing a top quality product.

'Packline' is a fully automatic high-speed and high capacity nonstop box closing machine for FEFCO 410 corrugated boxes. This line incorporates pin-point precision gluing, folding/flap-folding and accurate closure of the completely packed and labelled box, producing a high quality product in 'one-pass' ready for direct distribution to the customer.

The company also offers the new 'Popupline' for displays and 'Displayline' for more complex POS

www.laminasystem.com

Vega S.r.l's folder-gluer has reached a high level of automation, limiting the setup time and increasing the quality of the folding process.

The latest solutions are collecting units capable of semi-automatic or automatic box collection, which can speed up the process and improve work quality.

The first product is the EasyPack Collector; this unit comes from Revicart know-how, recently acquired by Vega. Claudio Pini, former owner of Revicart, has been collaborating with Vega to develop new technologies and advanced products and provide assistance on Revicart machines. This synergy has resulted in the mass production of this new, special machine.

The Easypack Collector counts and separates the shingled boxes right from the pressure belt of the gluer





to create parcels of boxes. Through a careful and accurate analysis of the customer's box types, it offers a wide choice of collecting solutions for parcels, starting from semi-automatic collection with single or fully automatic strapping with counting, package formation and package ejection with automatic strapping in line by means of two heads.

This solution will increase the performance of the customer's multipoint folder-gluer and will spare operators the burden of collecting and manually separating the piles of boxes to be strapped, a demanding operation that often causes delays in processing. More than 80 units are already operating in box factories across the globe, helping operators with their daily collecting.

If you are looking for a way to completely avoid the exhausting collecting operations, the new

Rotopack could be the right solution This module rotates, flips or overlaps each single bundle and prepares it for the best palletization process. Rotopack can palletize up to six semibundles in one pack of boxes, before the automatic strapping operation. This solution is 'state-of-the-art' in automatic box collection; it is fully automated, it can be connected to any strapping unit on the market and used in line with any Vega folder-gluer. If the boxes to be collected are smaller than 200mm or larger than 1200mm, the units can be set aside and the standard collection can be easily set up.

Easypack and Rotopack collect any kind of boxes that can be made, be they straight line, crash lock, 4 & 6 corners in the above folded box dimensions.

www.vegagroup.it www.stitching and gluing.com



New 'JD e-com' Unit

The Tanabe JD BoxR specialty folder

gluer is now available with the new

'JD e-com' unit. It is a machine with

high output and accuracy and at

the same time more functionality

through improved servo controls,

Recognizing the need for an integrated gluing, tear taping, and dispensing of silicone paper, the engineering team at Netherlandsbased JD Engineers BV created the 'JD e-com,' a modular dispensing unit. The unit consolidates and organizes the tape, labelling and dispensing functions into one module, shortening setup times. It integrates with the JD BoxR control and is designed so its presence won't interfere when running boxes that do not require these features. The 'JD e-com' module was originally developed for the JD BoxR multipoint gluer, but it can be integrated into almost any multipoint

gluer.



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With so many years' experience with specialty folder-gluers, JD engineers offers solutions for technical problems encountered on almost a daily basis with older equipment. Having developed these retrofit solutions, it became clear that the company could market these products as complete units as opposed to just offering them as a quick fix. These retrofit solutions can be included with the JD e-com unit. www.jdengineers.nl

Adhesive Applicators

Flexible and Expandable

When considering a new, non-contact extrusion gluing system for a specialty folder-gluer, it makes sense to do your research and invest in a system that is value-added. Even if it may not be in your production plan today, a modular system allows future expansion including quality assurance features, such as detection of glue, flap, window, length, print registration, code and more. The Baumer hhs Xtend³ platform provides this capability and offers the maximum flexibility as your business and customer demands grow.

Corrugated packaging is becoming more complicated and is now requiring additional extrusion gluing guns. Selecting a control and verification platform that is flexible and expandable provides the ability to control cold and hot glue guns, verification sensors, and other specialty devices like tape applicators, kickers or markers as your customer needs change or expand.

While individual glue detection sensors can be used to validate the glue patterns, it is sometimes preferable to use camera-based technology. By integrating cameras, the applied patterns are easily viewed on the Xtend³ touch screen display. Glue patterns are quickly entered and adjusted with just a few touches. The camera-based solutions can be mounted further away from the corrugated boards and dispensed glue, ensuring they stay clean. Additionally, a single camera can read not only multiple glue lines, but also additional features, such as folds, print and more, eliminating the need for individual sensors on each glue valve. All settings, including tolerance, are password protected with multiple levels of authority.

Hot melt can be used for quick tack and to hold position until the cold

glue is permanently set. This can be particularly useful for multi-feeders, holding flaps in position, or preventing boxes from reopening after the compression section. A few strategic hot beads can allow the machine to operate at increased speeds while maintaining box integrity. If detection of this hot melt is required, a sensor such as the tried and true HLT-300 hot melt sensor can be utilized.

The use of a silicon tear tape allows a case to be closed or re-sealed for return shipment, which has seen a growing interest given the massive rise in online e-commerce. A coating head is used to lay down a ribbon of fugitive glue, then covered with silicone tape. This can be done in-line on the folder-gluer.

The ribbon of fugitive glue can be applied using the Baumer hhs Flexicoat coating heads. These have an extremely robust micro-adjustable bracket which allows the coating head to be positioned perfectly in relation to the cardboard surface. The patented micro-adjust product guide beneath the cardboard is springloaded and effectively compensates for variation in thickness. A clean cutoff ensures that the adhesive is not smeared or applied to sensitive antiglue areas.

Baumer hhs Xtend³



The Xtend³ controller encompasses all aspects of gluing, triggering and quality control while tracking any defects within the production stream. The ideal way to remove defective product is by an in-line ejection device from the OEM or provided by Baumer hhs. Alternative options are a UV spray marker, kicker or feeder stop.

The Baumer hhs portfolio encompasses solutions for virtually all quality assurance tasks in specialty folder-gluer production and is continually being expanded as we listen to our customers' needs. Recently Baumer hhs introduced a new linear lighting system with high-power LEDs for quality assurance. The system provides uniform, ultra-bright illumination for the complete camera viewing to improve detection results and significantly reduce setup times.

Baumer hhs provides the technology and application expertise that allow customers to manufacture a better box, providing real value to their end users. www.baumerhhs.com

Inspection and Defect Tracking

Valco Melton's ClearVision products continue to offer folder-gluers the ultimate in inspection and defect tracking. From one screen, the CartonChek system inspects with up to six cameras or sensors:

- GlueChek verifies glue placement, volume and presence to validate that every pattern has been properly applied. GlueChek camera can inspect folds in auto-lock bottom boxes.
- MegaGlueChek inspects wide areas up to 750mm looking for glue lines that are widely spread apart and that would require multiple single cameras.
 CodeChek reads any barcode or 2D code, performs a health check on the
- CodeChek reads any barcode or 2D code, performs a health check on the code and works with variable codes printed on any portion of the package. Barcodes are increasingly becoming the preferred way to inspect for mixed copy and ClearVision barcode camera speeds are industry leading,

exceeding 100,000 products/hr.

WindowChek verifies the correct height, width and position of the

film on cartons with windows and simultaneously inspects the glue pattern and detects contaminants.

LaserChek ensures perfect edges

- and finds errors in relation to folds, flaps, cutouts and height changes.

 FoldChek analyses gap and skew of every box and ensures that only perfectly
- folded boxes arrive to the customer.

 PrintChek measures print variation in relation to the desired value set at the beginning of the order run.

All cameras are easily moved around on the machine during makeready and new tracking distances are learned when running the first boxes. The tracking system can trigger OEM ejection devices or Valco Melton's assortment of defect marking and removal options.

Dave Swedes, VP of Engineering, says, "Our customers are already amazed at how easily operators can arm CartonChek and figure out the software without any assistance.

CartonChek is not only new camera technology that is special to Valco Melton, but it is truly a system that operators want to use because they know it helps them."

When coupled with Valco Melton's glue application controls, the ClearVision user interface becomes the sole location where both inspection and gluing are viewed and adjusted.

As a pioneer in valve technology, multi-orifice, non-contact valves offer an efficient alternative to high valve counts in a typical machine. The multi-orifice nozzles have clean glue cutoff and can dispense dots as well as beads at high speeds. This technology represents a large savings in system cost as well as maintenance and makes the glue system far more flexible than single-orifice only options.

Valco Melton's SealTak tear tape, glue and release liner dispensing equipment converts any specialty or multi-point gluer into a sophisticated e-commerce production machine designed for high-speed use and long component life. ClearVision even has a color inspection system for inspecting all of the e-commerce components on a box – a requirement when running at 200 m/min.

CartonChek, together with Valco gluing equipment, is a reliable combination of technologies that works to make better products faster. www.valcomelton.com



Valco Melton's ClearVision system





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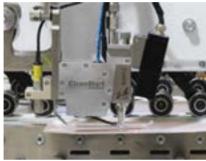
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Maximizing E-Commerce

Box manufacturers that are rising to the demands of e-commerce packaging can deliver high-graphic products with surety of 100% quality, increased production and decreased downtime - with new Leary solutions.

Guarantee 31 mm gluing accuracy combined with the widest available glue viscosity range with Leary's new high-speed Sempre-i glue valve. Add automatic valve tip cover with



CleanStart technology to reduce glue consumption and boxes at machine start up - as the first box through the gluer at start up is sellable. Add quality improvement to your production including detection for glue presence, placement and volume with ease. Monitor mix

prevention and verify customer code readability at 2,000 scans/second, reading each code multiple times to ensure reliability. Multiple code symbology options are available including 1D and 2D codes.



Finally, improve productivity with missing or dropped flap detection. This solution monitors absence and presence of flaps, inspects for hanging scrap and correct cut outs as well as detecting dropped 45° crash lock or 4/6 corner flaps.

Combine these technologies with Leary's Monet, simple-to-use controller interface software to deliver box-improving solutions for existing and new specialty folder-gluers. www.whleary.com





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Adhesive Application

FFG go is the name of a new solution from Baumer hhs designed for glue application in flexo folder-gluers. This latest member of the company's "go" product line offers simple, intuitive operation, but meets a variety of demands on non-contact gluing. Developed for applications requiring gluing only, all the "go" products achieve an excellent price/performance ratio. The FFG go can operate 2-bead application heads based on DLK go

technology for simple applications, or a 3-bead configuration based on P-500 technology for more demanding tasks. These multi-application heads can be flexibly adapted to customer requirements and are in use in over 1,500 machines around the world.

The heart of the system is the Xact FFG go controller, backed by the latest software and hardware technology. Its range of functions is geared entirely to the gluing process – giving customers



the option of applying dots or lines. Programming the individual glue beads via the menu-driven interface couldn't be easier for operators: all they have to enter on the touchscreen is the top flap dimensions and the flap length. The Xact FFG go also supports gluing on angled or slotted flaps.

With its Glue Save mode, the FFG go further ensures high-level sustainability and cost efficiency. This function converts the system from continuous to intermittent gluing, which can reduce adhesive consumption by up to 50%, without compromising the adhesive strength of the glued areas.

Operators can select one of 30 different languages from the menu. The controller shows all displays, help texts and error messages in plain text in the chosen language. In addition, the controller's memory can store the settings of up to 99 orders. These functions combined guarantee simple operation – and short setup times.

Baumer hhs supplies the FFG go as a complete package, including a pump with automatic or manual adjustment. The automatically controlled pumps adjust adhesive pressure to the production speed, guaranteeing uniform glue application at all times. The lowercost, manually set pumps are ideal for production machines with minimal speed variability. The FFG go standard package includes a pump with a maximum adhesive pressure of 30 bar. Pumps suitable for a higher adhesive pressure are also available.





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AI/Machine Learning Platform

Helios is a new AI and Machine Learning platform tailored specifically to the corrugated converting industry. The platform is OEM-agnostic and engineered to provide corrugated manufacturers access to robust, actionable insights into the performance of their machines – enabling minimized downtime, optimized maintenance schedules, and maximized profit. Helios is a product of SUN Automation Group.

"IIoT makes every bit of data actionable," says Helios Director of Technology Matthew C. Miller. "So many corrugated plants rely on human intuition and experience to drive their decisions. With Helios, anomalies that are imperceptible to even the most well-trained operators can be detected in real time and acted upon. And the machine learning capabilities will mean that the platform only gets smarter the more data and user reactions that it is able to process."

The new platform is designed to decrease the costs associated with only taking machines offline for preventative maintenance (as opposed to major malfunctions). Some of the most beneficial insights are preventative/proactive parts ordering, knowledge about the exact time and cost of parts replacements, the ability for operators to pinpoint the source of slowdowns and other issues, and operator-efficiency training to help machine operators learn and adapt to best practices.

"We understand that data is only as powerful as the actionable insights it can provide," says Chris Kyger, President, SUN Automation Group. "That's why we are so excited to bring Helios to the corrugated industry. This incredible technology will help box plants increase productivity and efficiency while reducing costs and downtime."



Helios provides core insights from an accessible, userfriendly dashboard enabling three key benefits: remote monitoring, predictive maintenance, and anomaly detection.

Remote monitoring provides deep insights into current and historical machine operation and performance that can be seen and accessed in real time from any device. Predictive maintenance optimizes machine maintenance intervals using artificial intelligence that adapts based on the machine operation and usage. Anomaly detection notifies users about abnormal machine states that allow operators to react to a potential issue before the failure occurs. More robust predictive analytics will be phased into the platform over time.

Corrugated manufacturers will have access to a free Helios demo. The site also provides a Return On Investment calculator.

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capabilities are standard, such as smartphone communication to send status updates and end of cycle alarm. There are also cloud based features such as managing and accessing roll reports from anywhere at any time.

The Sitexco+ System is available for live or virtual demonstrations in the Eaglewood Technologies' Minneapolis, Minn., Demonstration Center, which is CDC compliant.



FOR MORE INFORMATION
EAGLEWOOD TECHNOLOGIES
www.eaglewoodtech.com



Workflow Software

Esko has unveiled a new release of its Automation Engine workflow solution, packed with new capabilities and for the first time available as a Software-as-a-Service ('SaaS'). The automated workflow solution automates prepress tasks and integrates with business systems, which speeds up the process, and reduces the error rate and need for operator intervention. The newest

release includes a new 'drop zone' feature, which makes launching workflows quicker and easier by enabling users to search and select workflows, drag and drop files to it, edit parameters and initiate - all from one location.

"Quick and easy viewing of files for detailed quality



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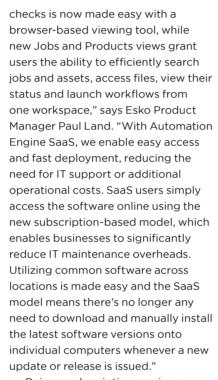
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Being a subscription service, a simple, flexible and transparent tier-based pricing model offers a predictable cost to help with IT budgeting and management. "With the price including a storage allowance and no bandwidth charges, the SaaS model guarantees a low step-in price and faster ROI for customers," says Land. "With IT and licensing costs now reduced through automation and outsourcing, this delivers a flexible pricing model that scales with the needs, size and growth of a business."

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