

# Corrugated TODAY

THE BI-MONTHLY PUBLICATION FOR AMERICAN AND CANADIAN INTEGRATED AND INDEPENDENT BOX MAKERS

MARCH/APRIL 2021

INSIDE | HIGH SPEED FFGs • VOLK PACKAGING • THE DIGITAL PLANT • PLANNING FOR EXPANSION • LITHO PRESS



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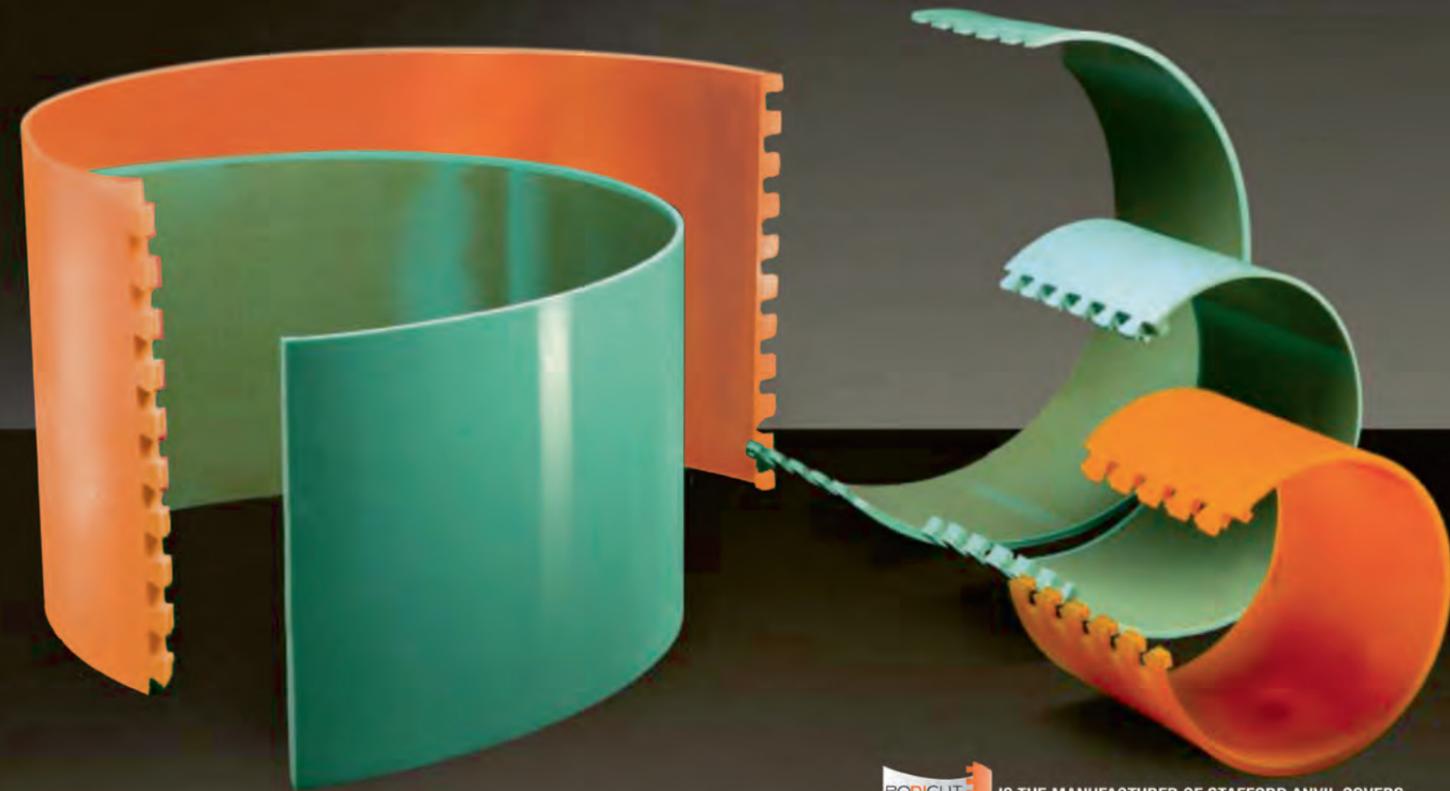
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**Daniel M Brunton** Joint President/Publisher

**Board of Directors** Jeneane Vilardi  
Daniel M Brunton  
Michael Brunton

## NORTH AMERICA

**Editorial Office:** Jackie Schultz  
Tel: 440-356-2257  
[jschultz@corrugatedtoday.com](mailto:jschultz@corrugatedtoday.com)

**Sales Office:** Robyn Smith  
Tel: 910-553-4055  
[rsmith@nvpublications.com](mailto:rsmith@nvpublications.com)

**Marketing and Circulation Office:**  
PO Box 802, Manasquan, NJ 08736  
Tel: 800-962-3001  
[advertising@nvpublications.com](mailto:advertising@nvpublications.com)  
[www.nvpublications.com](http://www.nvpublications.com)

**Jackie Schultz** Editor-In-Chief  
**Robyn Smith** Executive Publisher  
**Len Prazych** Contributing Editor  
**Rebecca Rendon** Contributing Editor

## EUROPE AND ASIA

**Editorial/Marketing Offices:**  
1 Salisbury Office Park, Salisbury,  
Wiltshire SP1 3HP, England.  
Tel: 011 44 1722-337038  
Email: [dan@brunton.co.uk](mailto:dan@brunton.co.uk)

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# PLANNING FOR THE NEXT NORMAL

The term “recession” is a relative one depending on which industry you work in. If you are a commercial printer or an event planner, business is probably not going well in this current economic climate. If you work in a corrugated plant, you are likely busier than any other time in recent history. For comparison, box shipments increased 11.4% between December 2019 and December 2020 and operating rates were 95%. In the 2008 recession, box shipments declined 13.7% from January 2008 to January 2009 and operating rates hovered around 70%.

During the last recession, there was a lot of advice being imparted by industry consultants about how board converters should be preparing for a recovery, taking advantage of the downtime to train staff, purchase and install new equipment and update their facilities. Preparing for the end of this recession warrants a different approach. When the current economy rebounds and people are comfortable dining out, going to stores and spending less time at home placing e-commerce orders, box shipments will likely return to pre-COVID levels.

If this crisis has taught us anything, it is the importance of being able to shift gears very quickly while going 100 mph. It has also highlighted the power of digital connectivity when in-person communication is not possible. “Pivot” might well be the word of the day to best describe a box plant’s approach to pandemic-related challenges. Board converters have

had to readjust nearly every aspect of their business to keep employees safe and machines running for on-time deliveries of corrugated packaging.

Technology took center stage and continues to play an important role. The pandemic has been a catalyst for digital transformation and accelerated emerging technologies that reduced person-to-person contact, automated processes and increased productivity. The corrugated industry embraced AI, Industry 4.0, cloud computing, video conferencing, and the Internet of Things.

### Opportunity For Change

Looking in the rearview mirror, how well did your business “pivot” when lockdowns were implemented and administrative employees had to work from home while your customers in the food and beverage sectors needed higher volumes of boxes? This might be a good time to evaluate what worked and fine-tune your strategy.

The ongoing health emergency crisis has inspired creative thinking that has led to new processes and better tools. For decades, industry suppliers have been talking about a “lights out manufacturing floor.” With plants continuing to struggle with the challenge of finding and keeping employees, the urgency

for more automation couldn’t be more straightforward.

This is a once in a generation opportunity for manufacturers to rethink their operations and consider new business models with the implementation of robotics, remote control systems and remote communications. This is not science fiction. Many box plants are already using these tools.

Beyond the manufacturing floor, companies are organizing for a world that is disappearing, according to McKinsey & Company. An era of standardization and predictability is being overwritten by four trends: a combination of heightened connectivity, lower transaction costs, unprecedented automation, and shifting demographics. The consulting firm highlighted imperatives that separate future-ready organizations, such as strengthening identity, using culture as your ‘secret sauce,’ prioritizing speed, treating talent as scarcer than capital, radically flattening structure, turbocharging decision making and building for scale.

Board converters and industry suppliers can build on pandemic-related accomplishments. Planning and taking note of what has worked is crucial for the future. As the saying goes, “If you fail to plan, you are planning to fail.” ■

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](mailto:jschultz@corrugatedtoday.com)

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# CONTINUOUS IMPROVEMENT AT VOLK

VOLK PACKAGING CORPORATION CONTINUES ITS PURSUIT FOR “CONTINUOUS IMPROVEMENT” AT ITS PLANT, WITH ITS CUSTOMERS AND FOR ITS EMPLOYEES.

BY REBECCA RENDON

This third generation, family-owned packaging company designs, manufactures and distributes high quality corrugated and foam products throughout New England.

Derek Volk, owner of Biddeford, Maine-based Volk Packaging, along with his wife and Communications Director Amy Volk, explain how their

focus on continuous improvement has allowed them to grow their business, pursue new markets and expand their capabilities.

## Equipment & Automation

In September 2020, Volk installed a new JS 1228 50" flexo folder gluer with rotary diecutter. "We have the first JS machine in the country and

that's something we are really proud of," said Volk. The investment in the JS 1228 has paid off. Volk explains that the print quality is flawless and the color printing has allowed them to pursue new markets, such as e-commerce. "The increase in efficiency since the installation, has been massive," said Amy. "An order that used to take four to five hours,



Amy and Derek Volk



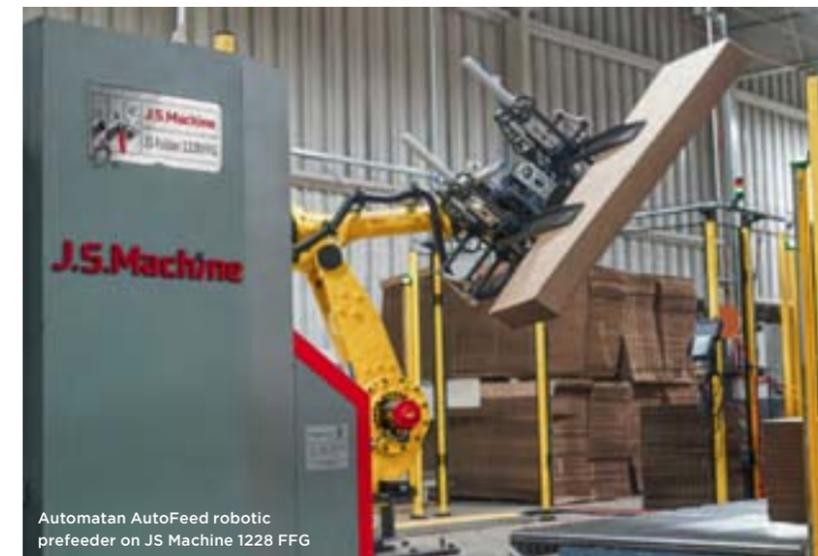
"We have been so impressed with our first machine that we have actually ordered another from them." Volk is planning a late summer installation of a JS1628 66" x 110" rotary diecutter with four color outside and two color inside printing capabilities.

now takes less than an hour. It's amazing what we are able to pump out with the new machine."

Also included in the nearly \$4.5m investment was all of the ancillary equipment, including Automatän AutoFeed and AutoStak robots, Systec Conveyor and an upgraded waste scrap system.

in this decision. Shortly after they returned, COVID hit, so I trusted their judgement and signed off on it.

"We have been so impressed with our first machine that we have actually ordered another from them." Volk is planning a late summer installation of a JS1628 66" x 110" rotary diecutter with four color outside and two color



Automatän AutoFeed robotic prefeeder on JS Machine 1228 FFG

inside printing capabilities. With the option for inside/outside printing, they expect to see a rise in business coming from e-commerce and other niche markets. This second phase of the 'continuous improvement plan' will cost another \$3.5m for the rotary diecutter, conveyor and robots. After the installation of the rotary diecutter, Volk plans to purchase a miniliner from J.S. Machine as well.

## Sustainability

Volk recently announced that they will be installing 77,000 sq ft of solar panels on the roof of their building in mid-March, as part of their sustainability investment. "We will be generating so much solar power that

"The AutoFeed has been running great with nearly zero downtime. It's amazing how efficient these robots are and we are super impressed with them so far," comments Volk. "Our main goal in purchasing the robot was to improve safety and reduce workers comp claims. It's been a home run.

"JS has been tremendous to work with," said Volk, who purchased the machine unseen, after sending his maintenance manager and the machine operator to China to look at the machinery. "They came back and said they were confident



The company is installing 77,000 sq ft of rooftop solar panels.



we are actually working on providing power to a local middle school that's about a mile away," said Volk.

Along with the solar panels, they have replaced 402 light fixtures throughout the office and plant, resulting in a 66% decrease in energy consumption and more than \$54,000 in electrical savings per year.

They also purchased a new state-of-the-art air compressor and scrap system. "The scrap system has been terrific in allowing us to produce nearly zero waste and really reduce our carbon footprint," said Amy.

### Investing in People

The excitement in Derek and Amy's voices is clear when they're talking about the new investments and future plans, but you hear a whole new voice of genuine compassion as they speak about their employees and the culture that has been created at Volk. Continuous improvement of internal relations, cultivating a culture of gratitude and investment in people, has contributed to Volk Packaging earning numerous awards including 'Best Places to Work in Maine' and has helped them retain employees so effectively. Volk reports that roughly 10% of their work force has worked at Volk for more than half of their life.

"There's so much that goes into creating this culture and the fun that we try to have at work," says Amy, discussing the Corrugated Olympics and various other contests held

throughout the year. Corrugated Olympics are a plant favorite and something that employees look forward to every two years. "It's a combination of corrugated cross-country skiing, hockey, basketball. We even have a corrugated podium and medals," said Volk.

In order to connect with his employees, Volk initiated 'Breaking Bread with Derek,' and took every one of his employees out for a meal last



Volk Packaging takes pride in their leadership training and investing in their employees.

year. "People open up when you have a meal with them. You learn so much more about a person than you would during normal day-to-day interactions at work," said Volk.

Volk Packaging takes pride in their leadership training and investing in their employees. They were recently named as one of only three finalists in the Crestcom Global Leadership Growth Award, recognizing their leadership improvement after taking the Crestcom Bulletproof Leadership Program. Volk has also been inducted to the Maine Manufacturing Hall of Fame.



Volk supports a balance of work and fun for employees with activities like Corrugated Olympics and daily prize drawings.



Volk Packaging is well-positioned for continuous growth, thanks to their investment in equipment, technology, and automation.

### The COVID Effect

Volk Packaging is fortunate enough to have made it through nearly a year of the COVID-19 pandemic with zero cases reported in their plant. At the beginning of the pandemic, Volk assured its employees that there would be zero layoffs. Fortunately, they have been able to deliver on that promise with the help of their employees. "In the beginning of COVID-19, we didn't have one person call off or say that they felt uncomfortable working. If they had childcare issues, the company covered that expense, so that we could maintain our workforce," said Volk.

"This year, we're expecting significant growth and will need to hire more employees within the next month or so," said Amy. "With the new machine, we're going after new markets and larger customer share. We have more than 1,000 customers which aided us during the pandemic. We're not dependent on any one industry, so we weathered the storm and did well."

The pandemic presented Volk with a new opportunity in fulfillment, with Volk Pack, a new division of VPC. In August, a customer approached Volk with a need for repackaging a specific medical supply, to be sent throughout the US. This job has led to additional customers and has caused Volk to expand this division into another building less than a mile away.

Overall, Volk Packaging is well-positioned for continuous growth, thanks to their investment in new equipment, technology, automation and people. New doors have been opened for them with the installation of the JS 50" flexo and with Volk Pack, which they hope will be hugely successful. ■





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# THE FUTURE OF HIGH SPEED FFGS

DAN BRUNTON INTERVIEWS INDUSTRY SUPPLIERS ABOUT MARKET TRENDS, NEW TECHNOLOGY AND THE PATH FORWARD DURING A VIRTUAL WEBINAR WITHIN THE CONNEXION COMMUNITY APP.



**F**lexo folder-glueers have advanced into powerful work horses capable of high speed converting of corrugated sheets. Machinery suppliers discuss how the current market trends of smaller order sizes, more frequent setups and high graphics packaging are impacting their application in a box plant.

**What is the future for high speed case making? Are we seeing a major change in how box plants are producing their packaging?**



**David Arnaud:** For Europe and the U.S. the average order size is still quite long - 13,000 to 15,000 feet per job. Even

with the trend of reduced order sizes, the number is still high, so it makes sense to use a high speed case maker for those jobs. The COVID crisis is contributing to the rise in e-commerce which requires a high volume of standard boxes. This balance makes us think that high speed case makers have a bright future. Globally the market of our box plant customers is



you see machines stopping because of lack of board incoming or because they don't have the right pallet. The pre-feeder makes sure the board is continually feeding and pushing the machine, and the palletizer is making sure what is produced at high speed is taken away and does not create a bottleneck at the end of the line.

a high volume market with very low margin on the single box. So even for short orders the speed to produce the box will be a key in the profitability. Of course the setup time for shorter runs will be important, but we cannot afford a slow speed even for these jobs.

**The application of peripheral units, such as pre-feeders, bundlers and strapping systems, are very important. How do you advise your customers?**



**Enrico Galloni:** A pre-feeder, palletizer and strapper is important to reach high productivity for many factors. Operators can work faster during the order change. Factories are working with less people, especially now with the COVID crisis. But another important factor is the logistics. Without a pre-feeder

It is very important when designing the process that you see everything as a line - the feeder, case maker, bundler, palletizer. If you don't design it that way you could create much longer setup times.

Another important point is the focus on training. Many times the customer wants to buy a very fast machine, but after one year they still don't know how to use it. So the peripheral is the solution but in some cases might also be the problem.



**Giovanni Bettini:** I agree with David about needing high speed machines for long e-commerce orders. But you also

have customers who are running very short orders, 2000, 3000, 4000. In the case of this customer, 50% of the time is the setup and 50% is real production so because of that you need to produce at high speeds, otherwise you lose productivity.

**Regarding the number of colors, has there been a significant move from single to two, three- and four-color?**



**David Arnaud:** We have seen a switch from offline processes to inline processes and this is pushing the number of colors on

the machine. Still today, 80% of the jobs are two or less colors.





**David Arnaud:** The key word is automation. If you install a full line automation transforms operator time into machine time. Once you make it machine time you ensure the performance of the line. Some of the highest performing machines today are able to manage two orders in the line. The machine begins feeding the second order before the first order is finished. This a way to push automation and get the best from the full line concept. I think this is a key for the future of our industry.

**Paul, when you're working with clients in the North American market, how do you determine what's the right machine?**



**Paul Aliprando:** Most of the machines in the market today are open/close machines and are the work horses of the industry, but the newer machines are set while run. We talk to customers about their product mix, the proper size machine and how many orders they run per shift per day. With an open/close machine you're going to have downtime. A lot of the new machines can set up in two or three minutes. If you're running around 10 setups a shift, you might want to consider a set while run machine. Some investments can be millions of dollars and it gets into what is going to be your trouble spot along the way. Most of the time it's not the press.



**Rob Garvey:** We start with trying to understand the work mix. Are customers looking to expand into new markets or are they at a point where what they are currently doing is at maximum capacity? The first thing customers



tend to do with us is look at their product mix and the pinch points within that mix. And then we home in on whether the complexity of what they're trying to produce fits open/close or fixed architecture. Set while run fixed type machinery is hyper fast but it's important to look at the entire line. If you have a quick set machine it is critical that you have the front and back end sorted to match the speed of that machine. But that's more typical for simpler box types, one- or two-color work. If you are into more complicated box types where you need to spend more time setting up the slotter or involving the diecutter more regularly, then you're probably losing the advantage of the fixed type because of the time spent setting up those other elements, which you could do on an open/close machine. We tend to find the open/close architecture gives the customers more ability to go after a more varied product mix, be it short or long run.



**David Arnaud:** Regarding the differences between the fixed frame and the open and close machine, I personally think we are able to produce exactly the same boxes with both



types of machines. The bond is the performance, how good you are in the setups but also in terms of speed. Thinking about graphics, if you have a fixed frame machine you can add larger dryers than an open and close machine giving you more power and speed. When choosing which machine it's really a question of user-friendliness, performance, price and footprint in the plant.

**There's also the opportunity to print the box. David, your company offers high quality post print stand-alone offline machines. Has Bobst been able to move that technology to its inline processes?**



**David Arnaud:** We don't do anything different between the high graphics quality of an offline post print flexo and an inline post print flexo. It can be a case maker, a rotary diecutter, an offline

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flexo printer. We guarantee the same quality, but we need all these different segments because the processes are different and customers are not making the same boxes. Today the expectation of the brand owners is the same whichever the process, and the converters make the box the most efficient way.

**Paul, how are you addressing preventative maintenance with your customers? As we move into Industry 4.0 and the Internet of things, connectivity is very important, correct?**



**Paul Aliprando:**

Absolutely and it's the access and data that the machine is giving you. The machine will tell you what the problem is. The maintenance person walking around with a 5-pound mallet to move a slotter head is not what we want anymore. What we're doing with IoT, analyzing machine data and getting the anomalies verified is helping reduce some of that preventative maintenance and lowering the total cost of ownership of that machine.



**What does the next five to ten years look like in terms of the process of high speed case making? Will there be hybrid combinations with digital marking systems?**



**Enrico Galloni:**

It has been more than 10 years that digital printer suppliers have been telling us that they are going to kill us in the next year, but flexo is still here. Digital competes more with offset printing and the advertising



sector and covers a very tiny segment of the boxes being made on case makers. As the demand starts growing we will need the capability to meet the needs of customers who are producing boxes that are stored in automatic storage systems and have to be individually tracked for the food industry or other sectors so the box must be individually identified. It's not huge at the moment but we see a growing demand of integration between flexo and small and faster digital, one- and two-color maximum. In the near future this will be one plant for sure.



**Rob Garvey:** We've all dreamed of a digital case maker but the realities are slightly different. Flexo is a winner because it's well proven, well known and cost-effective. It has taken digital a number of years to develop to where it is now. The



Digital printing will be complementary to flexo printing. It will not replace it. One of the key points will be the total cost of ownership because of ink prices.

slight concern I would have with digital printing on case makers is you can't get the depth of color that you can with a flexo. Track and trace ability on a box is a sensible approach, therefore a hybrid is a solution. I'm not sure if or when we will get to a digital case making line.



**Giovanni Bettini:** I don't see digital printing replacing flexo printing in the next five to ten years. Also because of the COVID situation we have learned that people are buying more through e-commerce and e-commerce

doesn't need high graphics printing. But they need the trackability of this box so it can be traced. This is something that can be useful for high speed case makers because you need to produce high volumes for e-commerce but also to be able to track each box and we can do this with a barcode to determine what was inside the box and to what person it was delivered. This is the future I see with high speed case makers.



**Paul Aliprando:** I see digital more for security and serialization in the near term. I don't see it as a full color option replacing flexo in the next five or ten years. The main thing plants need to look at is the reliability and uptime of the digital printer. When you need to maintain a digital printer a little bit more than an ink chamber, that's going to create some issues.



**David Arnaud:** Digital printing will be complementary to flexo printing. It will not replace it. One of the key points will be the total cost of ownership because of the price of the inks. Once we have reliable solutions, even for

serialization and once the ink price decreases, it will push the technology. For the future we will see more inside printing. There are some solutions on the market already for the premium experience and e-commerce. This solution will need to be more developed and the market is asking for it. ■

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From left, Bernie Lacy, Carrie Stone, Zack Bird, Justin Hiott, John Lacy, Andy Canady, Lisa Milborn and Mike King.

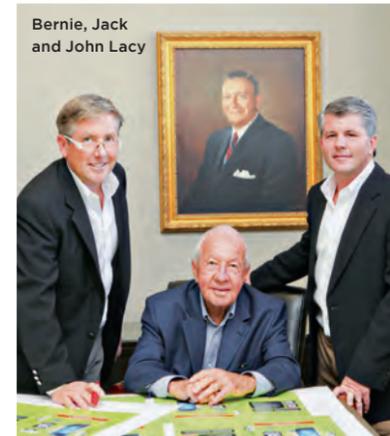
# GIANT LEAP FOR LITHO PRESS

LITHO PRESS INNOVATES ON A GLOBAL SCALE WITH POSSIBLY THE WORLD'S LARGEST FOILING FOOTPRINT.

BY REBECCA RENDON

With the Litho Press spirit of innovation and some special engineering from Eagle Systems, another milestone of foiling abilities has been achieved. The Eagle Systems VLFM190LP 51" x 73" cold foil unit at Litho Press sets the bar higher, bringing new opportunities to designers

and brands across the world and changing the way cold foil is done. Litho Press, located in Indianapolis, Ind., was founded in 1953 by father and son duo, Bebe and Jack Lacy. For 40 years the company operated strictly as a commercial printer. When Lacy's sons, Bernie and John, joined the family business in the 1990s, they



expanded to include litho labels, top sheets and folding carton. Bernie and John Lacy continue their grandfather's legacy of staying at the forefront of technology and innovation. Today, the company is one of the first printers to calibrate their digital department to G7 specifications. They are a certified G7 master printer, serving customers throughout the corrugated and folding carton industries.

"Our customer is number one. We believe in buying the best equipment, best ink, best coatings and best paper available. Only German ManRoland, Heidelberg and Koenig & Bauer presses are found in our pressroom," said Bernie Lacy, President.



Bernie Lacy

Litho Press has an already impressive lineup of presses at their facility, including a 41" ManRoland 700, 64" Heidelberg Speedmaster XL164, 73" ManRoland 900XL and one of the world's largest sheetfed presses - the 81" Koenig & Bauer Rapida 205.

**Corrugated Appeal**  
The new size capabilities for foiling has opened the door for Litho Press to cater to the corrugated market now, bringing them solutions that were not readily available due to size limitations. Typically, the cold



Koenig & Bauer Superlarge format sheetfed offset press

Looking to maintain their position as industry leaders and innovative printers, they needed a way to differentiate in the corrugated and folding carton industries and bring new options to customers. Justin Hiott, General Manager, explained how discussions regarding new CapEx investments eventually led them to work with Eagle Systems, to create one of the world's longest cold foil units. This innovation fills a void that has existed in the marketplace up until now, for cold foil jobs up to 73" long.

foil units are on 40" presses, limiting foiling options to the folding carton industry. Now, cold foil can be applied to labels up to 73" that can then be applied to corrugated sheets, allowing designers to use foiling in new ways. With this new cold foil unit on their ManRoland 900XL 6-color press with UV and aqueous coater, Lacy hopes to offer designers new options for corrugated displays and packaging where they couldn't add foil before. "This is something new and exciting for the corrugated industry," said Lacy. "Cold foil isn't new, but the size limitations have kept foiling somewhat exclusive to folding carton. We are proud to offer this new option to our customers and we expect to see great success. My hope is that



Justin Hiott

our corrugated customers see this as an opportunity to differentiate their packaging in a new way."

Litho Press saw the opportunity to attract new business by doing something bigger and better than anything else available. "In the days of digital printing and trying to keep ourselves relevant in offset printing, we needed to do something that no one else could," Hiott explained.

"We are one of the only ones in the world doing this and here we are in small country, Indiana," said Hiott. "We are proud to represent Eagle Systems and to bring this opportunity to the global market."

Hiott continues, "We don't know what the future holds. Based on the excitement from our customers and the generation of quotes, we expect a lot of interest in this new offering. We anticipate this foiling unit will pay for itself within 12 months."

**Evolution of Cold Foil Units**

Eagle Systems was one of the first companies to engineer a large foil machine in 1975. "My first foil machine was, what I thought, a large format - 35" x 49"," says Mike King, owner of Eagle Systems. "It ran at maximum speed of 4,000 sheets per hour. Hundreds of these



Justin Hiott examines printed sheets with a press operator.

machines have been installed worldwide over the past 45 years."

In 1992, King was challenged by an Australian customer to create the first VLFM (Very Large Format) 40" x 56" foil unit. After this, their largest foil unit, the VLFM 162 44" x 64", landed in Canada in 1996.

Cold foil has always been an option in the marketplace, but Litho Press didn't know if it would work for them. "Within a week of conversations with Mike, we realized it could be done and would be relatively inexpensive, in terms of CapEx improvements," said Hiott.

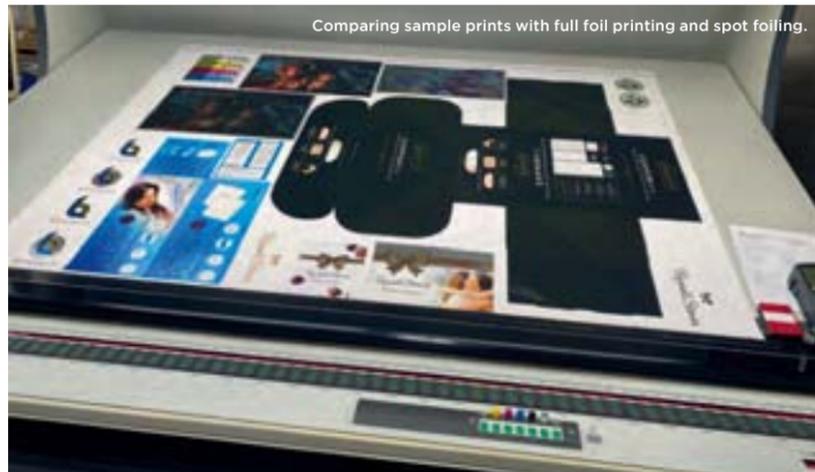
**Color Cold Foil**

Cold foil is typically done on silver foil with overprinted colors. Before this, colors were produced with multi-pass hot foil, which is costly and time consuming due to the need for dies and colored foil.

This new solution applies glue in the first unit of their ManRoland press, then the silver foil is applied in the second unit. From there, it passes through the last four units where ink is applied to the foil, giving the package an eye-catching sparkle and pop of color, further setting its packaging apart from competitors. Previously, Litho Press had been printing on full-up,



Carrie Stone, Justin Hiott and Bernie Lacy



Comparing sample prints with full foil printing and spot foiling.

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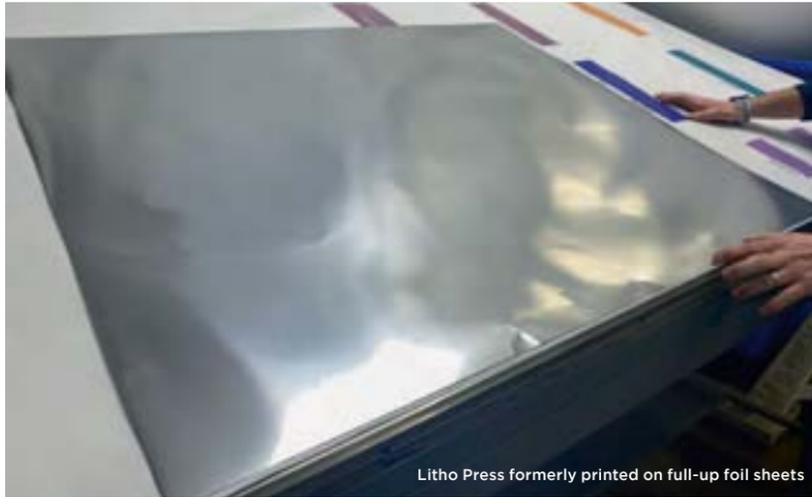
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Litho Press formerly printed on full-up foil sheets



Large sheets like this LG television box, can now be enhanced with foil.

metalized non-recyclable sheets or board also known as laminated foil board, laminated foil sheets or metalized polyester. Cold foil is in fact 100% recyclable and re-pulpable.

"This is a new marketplace for this size format, as it has never been done before," said Hiott. "This gives us an opportunity to improve turn-around times for customers, lower costs and it provides us with a new offering that adds value to our company."

**Engineering Solutions**

Engineering this cold foil unit came with a list of obstacles, due to the old-style of the Litho Press building, low ceiling heights and multiple slanted

roofs. "The engineering challenge to build a foil loading crane was above and beyond imagination, but we did it," said King. "The Eagle itself, came with its own set of challenges, as a special flexible ramp needed to be built just to install the machine." Eagle Systems worked closely with an external engineering company for building modifications that were needed, to accept this challenge.

The average running speeds of this size format is approximately

8,000 sheets per hour, although the Eagle is tested prior to shipping, at 22,000 sheets per hour. "This machine will last a long time, as it will run less than half speed," said King. It comes complete with a fully-electric ball screw driven make ready table, enabling easy loading and unloading of shaft mandrels. Also included is spare shaft with a preload system, helping to keep production moving and allowing for faster roll changes. It has the ability to run narrow webs, like the smaller Eagle.

**Sights on New Horizons**

Litho Press has already began running orders on the cold foil unit. Its first customer was a cannabis company who was looking to differentiate their product lines by using colored foil on their packaging. The sales team expects the cold foil offering to increase business by 20%, by providing them with an opportunity to get into customers they wouldn't have before and by giving customers a reason to reach out to Litho Press, instead of one of the many other printers. ■



The building needed significant modifications to fit the cold foil unit on the press.



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# INCREASING UPTIME

DON'T WAIT FOR A BREAKDOWN!

BY MARK PEYTON



Simple routine checks and changes can stop problems before they start.

THIS IS THE SECOND IN A SERIES OF ARTICLES BY SUN AUTOMATION ABOUT KEEPING MACHINES IN GOOD WORKING ORDER.

We've all experienced the effects of equipment failure, breakdowns, or major malfunctions, downtime, which can lead to delays in order fulfillment and worst of all major expenses. With the fear of major malfunctions in mind, the upkeep of the machines, particularly older machines, often ends up taking the form of compromising output speed and volume, and simply dreading the day when the machine breaks down without warning and throws the whole facility into a state of chaos.

And by the time a technician has to be called to the facility, it's safe to assume that margins are already being compromised.

What you may not realize is that there is an alternative to this cycle. Long before breakdowns and emergency calls to techs, there are simple routine checks and changes that can be made to stop problems before they start. Here are some tips and advice beyond the routine, planned maintenance that can make a difference in your bottom line, and in the overall health and longevity of your machines.

### Little 'Annoyances' Cost Big

"If it ain't broke, don't fix it" is a mantra that has long been the motto of corrugated plant managers. Although this may sound like it's aimed at saving money on repairs and upgrades that are not yet an immediate need, it really may be a short-sighted approach that saves money in the short term, but ends up costing more in the long run.

Just because machines are still running does not mean that they're running efficiently. Chances are that some of your machines may be a little finicky, or maybe they are still

functioning, but not at maximum capacity. While this may seem minor, it may be the harbinger of bigger, and preventable problems to come.

### What To Look For

Here are some common indicators of seemingly innocuous problems that could be an indication that minor service is needed:

- **Voids are showing up in the print.**  
Easy Fix? check the doctor blade. A new blade is cheap, and easy to install, whereas the 200+ boards lost from ink splatter, plus downtime for the repair could cost much more.
- **Jams are occurring but the plant isn't receiving notifications of the jam.**  
Easy Fix? It is likely an issue with a sensor.
- **Boards aren't being pulled down the way they should be, or the water gauge is reading low on the blower.**  
Easy Fix? There may be an issue with the doors inside the vacuum transfer not setting up correctly, which hurts the speed and efficiency of production.
- **Feed is experiencing skewing issues.**  
Easy Fix? There may be an issue with the feed gates, parallelism of feed roll nip or issues with the feed table itself.

Just because machines are still running does not mean that they're running efficiently.

While the above examples are common problems, the approach in many plants is to find work arounds. But as we say time and time again, small, persistent problems can cost big in the long run.

### Read the Manual

The challenging part about routine maintenance is that the naked eye, even of an experienced operator, is not always enough to know when some component is nearing the end of its life span. A machine could seem to be running smoothly one day, and then break the next day. But in this instance, there is a very simple yet often overlooked solution to stop these catastrophic failures before they start: the manual. The manual is more than just instructions for operation and troubleshooting when something goes wrong - it also provides recommendations of when to replace components before they wear out or break from natural wear and tear of daily use.

The best analogy for this is to liken your machine to your car. Everyone who owns a car knows about the

recommended maintenance intervals in the owner's manual. There are the routine maintenance recommendations every 30,000 miles for consumables like rubber hoses, wiper blades, and tires that wear out at regular intervals. And then there are other known maintenance intervals, like oil changes every 5000 miles, brakes and battery every 50,000 miles, and a new timing belt every 75,000 miles. No responsible vehicle owner simply drives their car until it breaks down, and they're willing to pay the moderate but ultimately tolerable fees here and there to protect themselves from having to buy a new engine after catastrophic failure. And as a car gets older, it becomes even more critical to stay on top of routine maintenance.

But just like in a motor vehicle, the key to these maintenance schedules can be found in the owner's manual, and it becomes even more important to stay up to date as the machine ages. And while skipping some of these component replacements may seem like an easy way to save a few thousand dollars, just like in a motor vehicle, failing to pay attention to them can ultimately cost exponentially more when something major fails. ■



By the time a technician has to be called to the facility, it's safe to assume that margins are already being compromised.

 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](mailto:mpeyton@sunautomation.com) or 410-472-2900.

# NEW CUSTOM GLUER FOR MVPS

AMERICAN INTERNATIONAL MACHINERY BUILT A 10-FT WIDE SPECIALTY GLUER THAT ADDS SIGNIFICANT CAPACITY AND OPENS UP NEW MARKETS FOR THE DAYTON SHEET PLANT.

BY JACKIE SCHULTZ

On Memorial Day in 2019 multiple tornados hit Ohio's Miami Valley region, killing two people and causing an estimated \$1 billion in damage. One of the tornados, an EF4, came perilously close to Miami Valley Packaging Solutions' (MVPS) 100,000-sq-ft facility. While it didn't demolish the building it did cause more than \$5 million in damage. Incredibly, the

only piece of equipment that was destroyed was a custom engineered and hand built folder-gluer designed to run large corrugated sleeves. The C-flute sleeves or envelopes hold glass panels that are manufactured by a long-time customer that does a significant amount of business with MVPS, with the potential to do even more. Losing the gluer to the tornado was a major blow.

With the urgency of finding a replacement, Kenny Phegley, VP of Manufacturing, contacted Bernie Czerwinski, Salesman at American International Machinery (AIM). AIM is the exclusive North American distributor of Signature folder-gluers. Czerwinski rushed to the plant with a flashlight and a laptop ready to discuss options, the end result of which was to build a one-of-a-kind

Don Chmiel (left), Jamie Williams (middle) and Kenny Phegley



## Do you still use PP bands ?

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Movie of TOM YTC145-D



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For reducing labor costs and measures against labor shortage, Japanese beverage manufacturers are increasingly automating their corrugated case production lines.

PE tape, which is easy to cut, take out, remove, and collect, is the most suitable for automation of the feeding process.



### 4. Conservation of the environment

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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.

“This is the first large format machine that we’ve made with a turning module that turns the carton,” says Kevin Koplin.

Signature Albatross specialty gluer. “They came up with a machine that would do all of the things that we needed it to and then some,” says Jamie Williams, MVPS President. “It’s a specialty gluer that also does straight line, four corner, and six corner trays and has the unique capability of running these sleeves.”

The machine is 10 ft wide and can easily handle the sleeves, which can be as big as 118 inches. It also can run any blanks off MVPS’ two 120-inch rotary diecutters. “That was the logic behind the size,” says Williams. “The yielding blank off of the diecutters maximizes what we can feed through that machine.”

A key feature is a turning module that can turn the sheets and re-orientate their direction to accommodate cross folding and gluing. “This is the first large format machine that we’ve made with a turning module that turns the carton,” says Kevin Koplin, AIM Managing Director. “You can turn it 180 degrees or 90 degrees. That’s unlike anything that has been done in the corrugated industry.”

A full line of glue is applied on each panel of the sleeve prior to going through the turning module and then folded to form a pocket. The gluer has 12 Baumer hhs cold glue heads. The turning module is used primarily for the sleeves, which are produced in several sizes. Williams anticipates that this business will grow, especially with the installation of the Signature



The specialty gluer is 10 ft wide and can easily handle sheets as large as 118 inches.



A turning module turns the sheets and re-orientates their direction to accommodate cross folding and gluing.

“We went from running 5000 in a day to running 50,000 in a day,” says Kenny Phegley.

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## To handle the additional capacity, C&M Conveyor installed automated intake, out feed and a load former on the Albatross, and three Signode bundlers were added.

Albatross. "Being able to produce the sleeves quickly is paramount if we're going to get the bigger volumes we're expected to get," he says.

### Great Versatility

After the tornado destroyed the original gluer, MVPS was hand gluing the sleeves. It would take 10 hours to hand glue 500 blanks. That same volume takes one hour on the

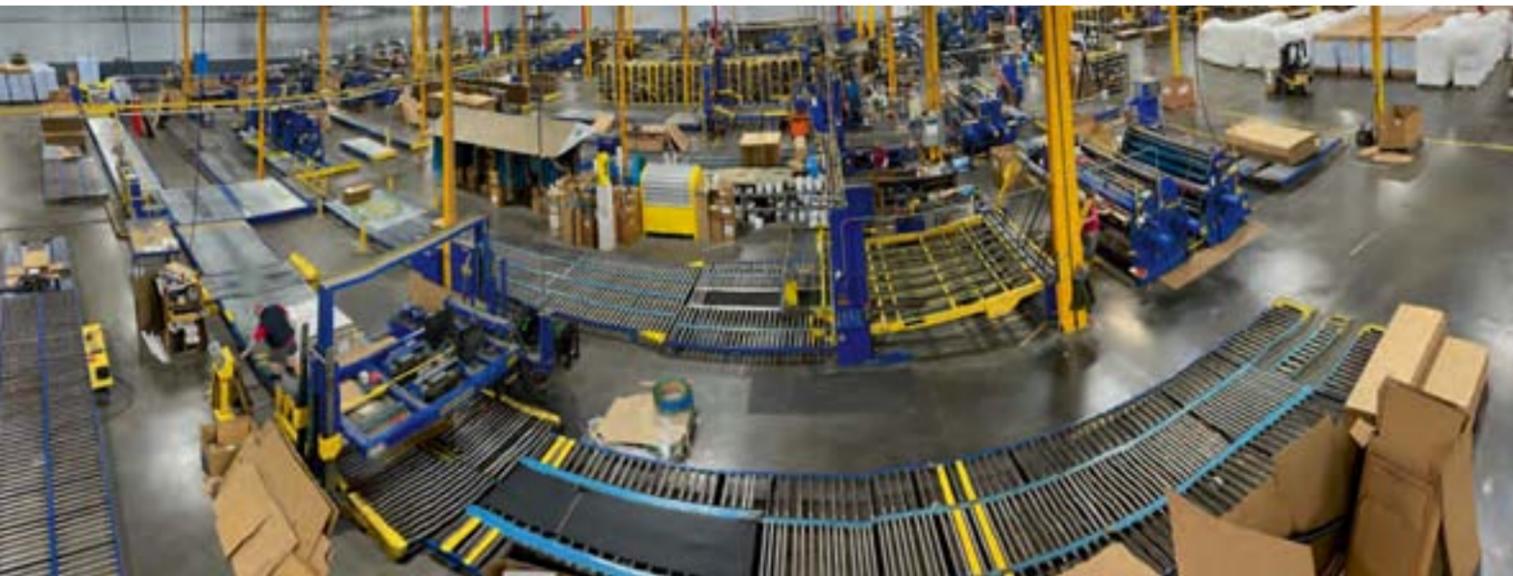
to run four-corner trays for local breweries. Board grades run on the machine have ranged from E-flute to B/C doublewall. It can run at speeds up to 1100 ft per minute.

"We've been able to do much deeper, longer boxes on the new gluer than we could have done on the Speed King," says Williams. "It's very versatile. We haven't even touched on everything we can do with it."

minutes for straight line boxes.

To handle the additional capacity, C&M Conveyor installed automated intake, out feed and a load former on the Albatross, and three Signode bundlers were added.

The gluer has opened the door to many new opportunities. "Our biggest customer who buys a ton of in-lined glued product grew to the point where his products fit in really



Miami Valley Packaging Solutions offers a diversified product mix, from custom boxes to corrugated plastic.

Signature Albatross. Its efficiency and productivity has greatly streamlined workflow through the plant. MVPS can now run large volumes and warehouse the inventory, eliminating the need to stage jobs and alleviating bottlenecks on the production floor.

In-line box styles were produced on an International Speed King gluer. The new gluer can handle a wider variety of jobs, including in-line diecuts, RSCs, FOLs, lock bottoms and the sleeves. There are even plans

Phegley says the Signature Albatross can also run very small boxes, as small as a 2- x 2- x 6-inch sheet, as well as longer volumes than the original hand-built machine, logging significant productivity gains. "We went from running 5000 in a day to running 50,000 in a day. That's how well it runs. I'll even run 500 boxes on it if we have the time." The average order size on the gluer is about 10,000 to 15,000, and setups take anywhere from an hour for lock bottoms to 20

well with that machine. We're able to handle a much larger volume of those in-line glued boxes," says Williams.

"What we would call a four-way bottom, we were semi-automatically feeding 2000 to 5000," says Don Chmiel, VP of Sales and Marketing. "Now we're running 20,000 to 40,000 across the new gluer."

The market is wide open for existing as well as new customers, even other box plants. "There's a lot of people out there that can't produce

a box because they can't glue it and we can do that," says Williams, adding that he recently received an inquiry from another plant about gluing a 7- x 6- x 48-inch box that would normally have to be hand fed through a semi-automatic machine. "We could feed that on the Albatross. I feel like we'll get some more of that type of business. We have the capacity."

The machine has been up and running since July. It was ready to ship from the manufacturing facility in Korea in early 2020, however the pandemic disrupted the delivery. Williams credits AIM with finding a way to get the gluer to MVPS. "The guys that built the machine and disassembled it in Korea were supposed to be the ones to come here and re-assemble it. That didn't happen. Kevin's team did a great job

being versatile and getting this thing done in a completely different manner than planned."

### MVPS' Journey

Investing in the Albatross is just one chapter in the history of MVPS's journey to become a premier and diverse sheet plant. Williams, Chmiel and Phegley purchased the assets of B&L Packaging in 2009 and created MVPS. They had been working for B&L for more than 20 years. In 2014, they moved the company to the current 100,000-sq-ft facility.

The sheet plant is vastly different today, with a more diversified product mix and modern equipment. In 2009, during the recession, the company expanded into corrugated plastic. "That was a steady business and kept us busy and it has grown

along with the rest of our business," says Williams. "We've tripled in size in employees, capabilities and annual revenue since we bought the company and we'll go beyond that this year." They started with 12 employees. There are 36 today.

"We are customer focused. A lot of people say that, but that's part of what got us into plastics as well as designing this specialty envelope for our customer's needs," says Chmiel. "We're very open to unique and new ideas for our customers. That's a lot different from the B&L days. We're willing to run anything, whether it be quantity, size or material. We focus on satisfying the customer to solve their packaging issues as well as developing designs and this new gluer makes all the difference in the world." ■

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# JESSE GENET

## FOUNDER & CEO OF LUMI

WE ASK THE QUESTIONS...

BY SARAH BERTRAM MOZINGO

If you were to Google "What is GCM?" the first video you would see is a highly energized, one minute clip of Jesse Genet explaining that although GCM stands for Glass Containers Manufacturers Institute, it is actually a system that shows how colors will express themselves on corrugated paper. This might lead you to believe that Genet is involved with the physical manufacturing of packaging – and with that, you are almost correct. While she is indeed highly educated on the nuances of manufacturing, Genet is the co-founder and CEO of Lumi, a software and technology company that streamlines e-commerce brands' packaging supply chain.

Though Lumi might be known for its fun and sometimes wacky marketing approaches, the company's real success lies in groundbreaking supply chain software and a team of people looking to change the way the world views packaging. The boom of the internet in the new millennium opened the door for e-commerce, subsequently creating a need for online packaging solutions. Lumi doesn't actually manufacture packaging. Rather, it connects companies with great suppliers all over the globe – kind of like the Airbnb of the packaging world.

**Tell me about the founding of Lumi. When and how did you get started?**

Lumi was founded in 2015 by myself and my co-founder Stephan Ango. We met at the Art Center College of Design where we both studied industrial design and Lumi is actually our second company we have worked on together. We went through a program called Y Combinator, which is specifically a mentoring program for tech companies. Dropbox, Square,

and Airbnb have all gone through that program and this highlights that Lumi operates in the software space, which is a detail that often gets overlooked. Forerunner Ventures, who focuses largely on e-commerce, invested



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Though Lumi might be known for its fun and sometimes wacky marketing approaches, the company's real success lies in groundbreaking supply chain software and a team of people looking to change the way the world views packaging.

in us early on as well. I think one of the cool aspects of Lumi's formation is that we have been on a software and technology trajectory from the get-go.

**What inspired the name "Lumi?" Is there a special meaning behind it?**

The name actually comes from our first company, which was also called Lumi. The old Lumi was based around Inkodye which is a light sensitive fabric dye that develops its color in the sun. That's why I called the company Lumi - like luminescence or light. When Stephan and I started the Lumi that you know today, we really loved the name, so we kept it. We already had

Lumi founders Jesse Genet and Stephan Ango



the social handles and website so not only was it easier to hang onto it, but the name also stuck because we thought it was fun and upbeat.

**I read that you started your first company when you were 16, your second company in college, and Lumi shortly thereafter. How did you manage to jump from tee shirts, to ink, to packaging? What caused or inspired this evolution?**

I think about this a lot! When I look back on my choices, it seems random. But in reality, it connects very directly. Tee shirts were simple - I had no expertise, but I knew I could afford to start this kind of business and get experience as an entrepreneur at a young age. Because I was doing tee shirt printing, I wanted to have a cool brand and stand out, so I started learning more about printing processes for shirts, leading me to the light sensitive dyes that I pursued in college with Stephan. When Stephan and I were working on Inkodye, we took DIY kits to market at places like Urban Outfitters and Michaels craft stores. In doing that, we had to package the kits particularly for retail. Through that we learned truly how difficult it was to package products. It was a slower evolution from Inkodye to Lumi, but that issue is what inspired us to dive in later on.

**You have a very interesting marketing strategy. How do you integrate story telling into your approach?**

Start by making no assumptions. For instance, I think people would assume "no one cares about boxes" or when you're selling software to businesses, "no one cares about humor or stories." Both of these things are completely untrue. You don't have to think that you need to be a serious person in order to be taken seriously or market effectively. Lumi's marketing approach has not hurt us one bit and from what I know, people enjoy the content. I think people understand that we don't make silly videos because we are a silly company, but because we want to communicate the information in an approachable way. Simply put, stories are sometimes more powerful than stats. If you bring stories and humor into the workplace, you will find success. Don't be scared. A reason people don't put out compelling stories is because they are nervous about how they will be perceived. Being authentic takes a certain amount of bravery, but when you do, it is far more likely that people respond positively.

**Do you plan your marketing specifically for certain groups of people?**

Our marketing certainly appeals to a younger generation, but I think that it

"We don't make silly videos because we are a silly company, but because we want to communicate the information in an approachable way."

"We have a roadmap of product categories that we plan to grow into. We also want to continue to grow our portfolio of manufacturer relationships and be cognizant of their locations in relation to our customer base."

attracts all walks of life. For example, we've heard that leadership at Honeywell uses some of our videos as training material. However, the most important thing to us is not who we are appealing to, but that the person who is viewing it understands the content and who Lumi is as a company. At the end of the day, we want to target the types of customers who are in need of what we are serving.

**What has been the largest factor that has played into the immense growth of Lumi over the past six years? What do your future growth goals look like?**

The most obvious thing to say is that the growth of Lumi charts well with the growth of e-commerce in general. It's not coincidental that Lumi exists while e-commerce is exploding. If you look at the whole length of the packaging industry, in the moment that we're experiencing, packaging has taken on a sort of "consciousness."

A box shows up on your doorstep and connects you with a brand you love. It's creating a relationship and a storefront for consumers. Older companies that are getting into e-commerce are purchasing packaging differently and they're using custom print now more than ever. Those changes create an environment where new tools are being asked for and this change creates opportunity. There are more Lumi-style customers every single day looking to procure packaging online. It's our goal that a brand can log on to Lumi and get all of their e-commerce packaging needs in one place. We have a roadmap of product categories that we plan to grow into. We also want to continue to grow our portfolio of manufacturer relationships and be cognizant of their locations in relation to our customer base. Though we always have crazy growth goals, we are more concerned with the building blocks rather than hitting certain sales numbers.

**Where do you find inspiration for continued growth?**

There is a quote I like by Paul Graham where he says, "Live in the future, then build what's missing." It's not that the people at Lumi are any smarter than the next tech company, there's no highfalutin-ness about it; what is happening at Lumi is we have a group of people who already use a ton of tech tools, who live in this "future" state of mind and are creating tools that simply don't exist yet. For example: proof approvals. Since our entire platform is online, it made sense for proof approvals to be online as well, but it wasn't several years ago. So, we had to create it. It's not like proof approvals was a new concept, we just extended the idea to fit our platform.

*As a self-described small fish in the big packaging pond, Lumi has seen incredible growth over the course of six short years - doubling and tripling year over year in both throughput and number of customers. So, maybe the company isn't such a small fish after all. As the online world continues to flourish, Lumi will surely be a force to reckon with. ■*



**Sarah Bertram**  
Mozingo is Marketing Coordinator for Complete Design & Packaging, a sheet plant in Concord, N.C.

where she manages social media accounts, implements campaigns, and supports the sales team with data and content. She is a regular contributor to *Corrugated Today*.



# REVIEWING SAFETY PROTOCOLS

# Safety

A BOX PLANT'S NUMBER ONE CONCERN IS THE SAFETY OF ITS EMPLOYEES. INDUSTRY SUPPLIERS CAN HELP.

BY DICK TARGET  
"ON TARGET" CONSULTANTS

In recent articles, I have discussed many important components that manage and directly affect the quality of corrugated products. We manufacture boxes that transport customer's products next door and packaging designs that ship items around the world. We manufacture E- and F-flute boxes for women's cosmetics and eyeglasses. We also produce standard B- and C-flute designs as well as double and triplewall containers that ship watermelons, furniture and diesel engines.

We should never "ever" overlook the people side of our business. All of our plants work extremely hard and long hours responding to

customer's demands while providing an environment that keeps our valued employees safe. We define attainable goals, offer proper training and actively support a strong foundation for long-term success. We must never forget the importance of providing a safe work environment.

We should also demand from our major equipment suppliers that their machines, components, parts and controls all parallel a company's philosophy of safety. Plant employees should be presented with properly designed equipment that guarantees their success while offering the opportunity of productivity in a safe work atmosphere.



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E-stop buttons, panic bars (within print stations) and knee stop controls should be properly positioned and located so that operators can reach them in emergency situations.

All of the equipment suppliers offer a variety of quality safety features on their equipment. Examples include E-stop buttons, light curtains, panic bars in print stations and spring load detectors identifying jam ups in various locations. Most plants have Lock Out / Tag Out safety systems for their equipment. These are managed by Lock Out Stations with associated padlocks and keys. Every operator should be required to have his own padlock with his name on it and a matched key to carry at all times. Plant visitors should be issued their own padlock and key if they plan to enter any machine. This prevents anyone from closing the press when an employee or visitor is standing inside a machine and out of sight. (This also certainly refers to the entire corrugator.)

In this article I want to address some of the features and design criteria that major machine suppliers offer. These points are a result of observations and experiences in my 40+ years working in this industry.

**Emergency Stops**

The access area of all equipment should be designed to encourage operators to keep their body parts free and clear from high speed and reciprocating areas and functions while the machines are running. Many presses today run at high speeds. Everyone is aware of this as it is certainly encouraged. This is one of the major factors that helps manage costs on the production floor and helps sustain a competitive marketplace for companies.

I'd like to focus on one specific area that is a concern of mine. E-stop

buttons, panic bars (within print stations) and knee stop controls should be properly positioned and located so that operators can reach them in emergency situations. The red E-stop mushroom type buttons are there for several reasons. They are used for more than just stopping the flexo or diecutter when sheets are jammed in the feed table, various print stations or the folding section/counter ejector. They are there as a tool to stop the machine when an operator is caught in one of the feed roll nips, side guides, folding belts or even the stacker or counter ejector. Some machines are equipped with E-stop buttons that are mere circles recessed inside a clear or metal cylinder. There is no way an excited, scared or terrified operator whose body parts are caught in a nip can find the center of the cylinder and push the enclosed, protected button in order to stop the machine so he or she can clear himself or herself. The same applies to the mushroom shaped E-stop button located out of reach of the terrified operator.

Take any feed section as an example. In many designs, the E-stop buttons are located on the operator's side, side frame in or on a control panel. They are in a fixed position housing (sometimes mounted on a swivel pendant) as to stay clear of the pre-feeder that is used to introduce the sheets into the feed roll nips. Some designs have a few controls on the extended feed table

which enables the operator to open and close the pre-feeder itself. Some are used as a feed interrupt function. Some do have E-stop buttons, but they are fixed and mounted on the operator's side.

I strongly believe that our industry should take a serious look at the designs of the feed table safety controls as they relate to the locations and positions of the E-stop buttons.

It is common practice today for the scheduling person in the office to specify sheets to be printed and diecut on a rotary and then fed into a flexo folder-gluer to be class stamped, folded and glued. It is also common practice for paper to be pre-printed on an eight-color press in roll form,



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I am concerned that operators do not have easy access to E-stop buttons when their fingers, hands or arms are caught in the feed roll nips.

converted on the corrugator into sheets, then diecut on a rotary or a flat bed. These pre-printed, diecut corrugated sheets are then fed into a flexo folder-gluer to be class stamped, dated, folded and glued.

Depending upon the accuracy of the stripper section in the flatbed or the condition of the ejection rubber in a rotary, many times scrap pieces remain in the loads as they are delivered to the flexo feed tables.



In that case, feed section operators or pre-feeder operators are frequently required to stand on either or both sides of the feed table in order to manually remove the residual, random pieces of scrap so that they do not travel with the sheets through the flexo. If not removed, these scrap pieces will end up either on the glue tabs, slots and ultimately cause downtime. Box plant customers also do not want random diecut scrap delivered to their facilities as it will interfere with automatic case erectors.

I am concerned that operators do not have easy access to E-stop buttons when their fingers, hands or arms (jumbo presses) are caught in the feed roll nips. An operator cannot reach a button mounted on the operator's side, side frame from either the operator's side of the feed



rolls, a center location or the drive side of the feed table when their hand or fingers or both are caught in the feed roll nips. At 250 sheets per minute (4 sheets per second) or even faster, things are happening at an alarming rate. The pain is unbelievable as fingers are being torn off the hand. When this horrible accident happens, the operator generally loses consciousness due to the pain.

Once someone in the plant can respond to the person in distress, serious damage has already happened. Please note that the actual process of removing the damaged hand or forearm can take hours. Unfortunately, this frequently results in amputation. This type of event happens at least once or twice a year in our industry. In my career, I have met over a dozen people with lost limbs, fingers and hands due to these types of accidents.



I would like to suggest that the feed tables be designed with better located E-stop buttons mounted on the inside of the side frames on both the operator side and the drive side of the feed table. Existing feed tables could be retrofitted with new controls.



They should be ergonomically positioned so when a person's hand or fingers are caught in the feed roll nip, that person can reach the button and stop the press. It might take more than one button on either side in order to afford the operator quick access to the E-stop controls so that personal injury can be minimized.

Once the fingers or hands are caught in the feed roll nips, it takes hours to free that person from the



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## Corrugated TODAY

THE BI-MONTHLY PUBLICATION FOR AMERICAN AND CANADIAN INTEGRATED AND INDEPENDENT BOX MAKERS.

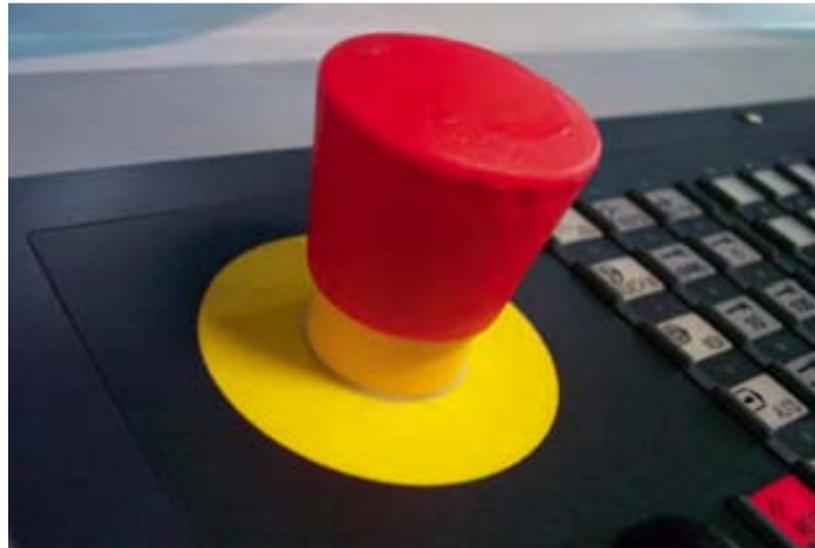
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I strongly believe that our industry should take a serious look at the designs of the feed table safety controls as they relate to the locations and positions of the E-stop buttons.



press. Currently, there are no designs available in our market for the quick release of the feed roll journals and bearing housings in emergency situations. The other point that I would like to mention is that at the plant level, there are few skilled people with enough knowledge required to disassemble the bearing housings or journals required to quickly disassemble the feed rolls from the feed section. When this situation occurs, the plant has to call the machine manufacturer and

designer for mechanical assistance for disassembly over the phone.

In our plants today, there are a wide range of machines. Some are new. Some are very old and may not have the required safety features. Many new presses are totally enclosed. I think that it is time to review your inventory and bring your plant up to date.

Please take a look at your converting equipment and update accordingly. This is an area that I feel needs immediate attention. As always, enjoy your job! ■



*Dick Target is a regular contributor to Corrugated Today. He is the owner of "On Target" Consultants in Lower Gwynedd, Pa., and teaches flexo and diecutter calibration short courses for TAPPI. He can be reached at [dicktargat@gmail.com](mailto:dicktargat@gmail.com)*

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# INTRODUCING QUANTUM BY FOSBER

THE NICHE CORRUGATOR SERVES THE SPECIALIZED MARKETS OF MICROFLUTE CORRUGATED, HIGH-END GRAPHICS AND LIGHT WEIGHT AND COATED PAPERS.

BY JACKIE SCHULTZ

After considerable investment and R&D efforts between Quantum Corrugated and the Fosber Group, Fosber America is now ready to launch a new version of the Quantum corrugator in North America. The new line is being marketed as “Quantum by Fosber.” Introduced in 2015, there are currently about a dozen Quantum installations worldwide, including one in the U.S. It was recently updated after the Fosber Group acquired 60% of Agnati and established a new company called Quantum Corrugated.

The announcement last year of Fosber’s intent to acquire Agnati

drew keen interest considering both manufacturers offer full line corrugators. However, the redundancy stops at the Quantum, according to Jeff Pallini, President of Fosber America. “We saw a real future for the Quantum technology,” he says.

Fosber offers three lines of what are considered traditional corrugators for high- and mid-volume box plants. The Quantum doesn’t compete with those lines. Instead it serves the specialized markets of microflute corrugated and high-end graphics, and soon will have laminating capabilities.

Key sections of the machine were re-engineered to include Fosber’s



Jeff Pallini, President of Fosber America

Key sections of the machine were re-engineered to include Fosber’s proven technology while keeping Quantum’s patented innovations to preserve its niche appeal.

proven technology while keeping Quantum’s patented innovations to preserve its niche appeal. The new line now includes Fosber roll stands, splicers, Compact dry end and Syncro corrugated control system. The computer-based corrugator control system is Fosber’s signature product that is now standard on all Quantum corrugators. Syncro uses intuitive touch screens and machine signals to display production information. It can provide control, monitoring, information display, data entry, diagnostics and centralized operation for a complete corrugator or individually on the dry end or wet end.

“The key to the Quantum is the singlefacer, glue machine and twinfacer,” Pallini explains. “Those wet end components are Quantum technology and that has not changed. The difference between Fosber

corrugators and the Quantum is the section that forms the flutes. What will give customers a competitive advantage is that Quantum section.” The Quantum is available in 70- and 98-inch widths and runs 1000 feet per minute. “It’s all about quality, specialty papers and the uniqueness of the fluting,” Pallini says. “Our sales team is going to be calling on people they haven’t called on before because we didn’t have an answer for this in the past.”

He acknowledges that the Quantum is not a corrugator for the mass market. “We sell five, six, seven complete corrugators in the United States a year. We might sell two or three Quantums.”

Existing customers in Europe are producing corrugated board for high quality flexo post print, and pre-printed top liners to achieve

near litho quality and several plants are producing sheets for single pass digital print. “For plants that focus on the production of microflute sheets, direct offset printing on corrugated board or specialize in the use of light papers, the Quantum is the perfect machine,” Alberto Brivio, Managing Director of Quantum Corrugated, says.

“In digital printing, we know that the quality of board being run on the printer is paramount,” he continues. “To this end, the Quantum ensures not only the finest flutes can be run at speed, but also some of the flattest sheets available in the market. Flat board creates an optimal printing surface and thanks to our process, there is no direct contact with the sheet during formation, meaning no slip or pressure marks on the outer liner.”

## Growth Markets

Fosber’s research to determine the need for a machine like the Quantum in North America revealed a niche in the high graphics, microflute and narrow web markets. “There’s not a lot of good narrow web machines out there right now and there’s plenty of narrow paper, and there are also a lot of people testing microflutes in order to get into other markets,” Pallini says. “Our market analysis brought several things to the surface and one of them was that the ability to produce microflutes efficiently to compete with other types of substrates is limited.”

He says the Quantum’s low and consistent heat requirement at the singlefacer and twinfacer are key to producing high quality microflute,





The production floor was expanded specifically for the Quantum, which will be supported by Fosber's aftermarket and services group.

lights weights and coated board. The additional enhancements with Fosber technology opens up even more market opportunities.

Brivio agrees. "This latest version of the Quantum sets a high benchmark. We have reduced the amount of energy it needs to run by over 30% and at the same time, we are helping customers make stronger board thanks to a reduction in mechanical and thermal stress on the papers, meaning they can reduce basis weights for their end-user customers. Lighter weight papers, lower starch consumption and less energy requirement all result in the ultimate in 'green' production, from the lightest singleface through to heavy doublewall board."

The machine is manufactured at Quantum Corrugated's Milan, Italy facility, three hours from Fosber Group's world headquarters in Lucca, Italy.

#### U.S. Expansion

In conjunction with the introduction of the new Quantum line, Fosber America recently completed a 40,000-sq-ft expansion of its headquarters in Green Bay, Wis. This included exterior renovations, the addition of a new bay on the production floor for the Quantum line and a new training center.

"We're super excited about the training center," Pallini says. "We built a very elaborate center with the latest AV equipment and virtual training

capabilities. There was a real focus on people's safety and comfort in the design. Properly trained people have become the limiting factor so you really have to invest in the ability to train more people more efficiently and that was the focus behind the office expansion."

The two large training rooms are separated by a mobile wall that can retract when a larger space is needed. The room can accommodate 50-75 people. "We equipped the center with both hands-on and virtual tools. What our customers want is for us to send them back someone who took the time to learn and was tested to make sure of that," he says. "The center was well thought out." Pallini credits Fosber's four trainers for the design.

"The difference between Fosber corrugators and the Quantum is the section that forms the flutes. What will give customers a competitive advantage is that Quantum section," Jeff Pallini says.

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Existing customers in Europe are producing corrugated board for high quality flexo post print, and pre-printed top liners to achieve near litho quality and several plants are producing sheets for single pass digital print.



The new training center is equipped with the latest AV equipment and virtual training capabilities.

The center has a separate entrance so customers can enter the building with their own key fob or access code and wait in a comfortable area where they can get coffee, watch television and make phone calls. "It's almost like the lobby of a hotel but they can't access anywhere else into the building. This assures their safety," Pallini says.

The bottom floor of the center has additional room for purchasing personnel and space for spare parts. The open space design includes motorized stand up desks, glass walls and assures a safe workplace.

There are five double deep bays on the production floor. The floor was expanded specifically for the Quantum, which will be supported

by Fosber's aftermarket and services group. "What we're known for is exceptional service, parts and low cost of ownership. That's why we didn't rush into this with Quantum. We had to get that all figured out," Pallini says. "When you deal with Quantum it will be no different than anything else you bought from Fosber and that has always been our goal." ■

Fosber America recently completed a 40,000-sq-ft expansion of its headquarters in Green Bay, Wis.



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# I THINK YOU'RE GOING TO NEED A BIGGER BOX...

SHOULD YOU EXPAND YOUR EXISTING FACILITY OR MOVE?

BY NICHOLAS O'HARE  
ARCO/MURRAY



Most plants need adequate space for roll storage and/or equipment

**D**riven by unprecedented consumer demand during the global pandemic, e-commerce sales have grown by over 30% in 2020. As stay at home orders shifted from days to weeks to months, many consumers were forced to adapt to shopping online, fueling tremendous growth in

the sector. Even preceding 2020, consumers have been moving away from brick-and-mortar retail. This shift has increased demand for corrugated shipping boxes dramatically – a report shows that demand was up 9% from March 2019 to March 2020, with increased year-over-year gains in June, July,

September, and October. A recent industry report predicts that the corrugated market will reach \$300 billion by 2023.

This rapid growth and increasing demand has plants running near capacity and leaves manufacturers saying, "I think we are going to need a bigger box..." Fun play on words, or

Remember to do your homework. Focus on locations with high ceilings, adequate utilities, low impact fees, standard floor slabs, and proper zoning.

no? Either way, once the decision has been made to expand, relocate, or add a new facility, there are a few key considerations to ensure the project is a success.

## #1 – Expand or Relocate?

Once it has been decided that your existing operation can no longer support your growing customer demand, the first decision you must make is: should you expand your existing facility or move? What is the right choice? Well, it depends. Both short-term and long-term goals need to be considered. Can a renovation or expansion of your existing location sustain your growth for the next 5-10 years? Does your existing property have adequate space for a building footprint expansion as well as required parking, bathrooms, loading docks, and access roadways that will be needed for increased activity? Are the utilities adequate for increased needs? What other building code requirements need to be considered for the expansion? Will you have to bring other elements of your existing operations up to code? Another significant consideration is location. Where is your current building? Is it in the best place to serve your customers? Maybe when your business first opened, the area was primarily industrial, but as the years went on it has become a "high rent district," and you can sell the property for a healthy profit. All



Can a renovation or expansion of your existing location sustain your growth for the next 5-10 years?

things considered, most operators see their current location as "home," and expanding their existing facility may be the least disruptive and least painful way to add capacity.

## #2 – Build or Buy?

You have assessed your current facility and determined that in order to support growing demand, you need another location. Whether that is moving your existing facility or adding another site, you have a decision to make – should you buy an existing building or build new? There are pros and cons to each, and the decision will come down to what is most important to you. An existing building has many benefits, including saving time on your project schedule. Because the building already exists, it will take less time to get it up and running. Under the same premise, acquiring a second generation asset may also be a more cost-effective option since you will not have to build ground-up from a green field. Another pro could be that existing ancillary

spaces such as loading docks, offices, etc., are already in place, allowing your attention to be placed on the plant/operations. Conversely, corrugated and converting plants are notoriously unique, and not every building will work or be cost-effective to renovate to meet your needs. So, how do you narrow down the field? Start by eliminating sites that make the buildout process cost-prohibitive or unfeasible by identifying these deal-breakers.

## BUYING CONSIDERATIONS

### Deal Breaker #1 – Structural Floor Slab

Sometimes good buildings are built on bad dirt. To adequately support the floor slab, the building is often built using a structural floor slab. This is not your typical 6" thick concrete floor, reinforced or not. It is an intricately designed concrete and rebar system that spans structural floor beams and is used to support the building slab. When you cut into it to build equipment foundations and pits, roll



When you're ready to expand, move, or build, choose a construction partner that is experienced and understands the unique requirements of your corrugated or converting facility.

tracks, etc., you will undermine the entire floor's structural integrity, and that is a deal-breaker. Instead, look for buildings with 6" or 8" thick standard floor slabs-on-grade.

**Deal Breaker #2 – Inadequate Utilities**

You may not find a building that meets your specifications on size and location that also has enough water, sewer, natural gas, or electricity to operate a corrugated or converting facility, and that's fine as long as adequate utilities are nearby and can be brought to the building cost-effectively. What infrastructure is in place from the electrical utility to allow you to upgrade the electrical service? Is there high-pressure gas

infrastructure to meet the demands of your boiler in a corrugated plant? What kind of requirements does the POTW (public owned treatment works) have regarding wastewater discharge? Will the existing fire protection system meet the current code requirements of a box plant? Instead, define your utility needs and then verify that adequate utilities are available cost-effectively.

**Deal Breaker #3 – High Impact or Tap Fees**

Just because you can get the proper utilities doesn't mean you're in the clear. The local municipality may charge an impact fee for you to connect to their water or sewer systems. If that fee is a couple

thousand dollars, then this might be the building for you. However, if it's a million dollars, that might be a deal-breaker. Instead, provide the local municipality with your projected utility usage and ask them to calculate your expected impact and tap fees.

**Deal Breaker #4 – Lack of Proper Zoning**

You found a great building, but the location is not zoned for a corrugated or converting facility. Yes, you can try to get the building rezoned. However, that will take months (maybe years), thousands of dollars, and there is no guarantee you will get the needed approvals. Lack of proper zoning is a deal-breaker. Instead, make sure the building is zoned for your use.

**Deal Breaker #5 – Low Ceiling Height**

Most plants need adequate space for roll storage and/or some of your equipment needs. However, buildings with say 16' clear heights often don't provide enough overhead space to stack rolls to maximize the volume of your building efficiently. Many things can be done to renovate a building but raising the ceiling height is often not one that can be done cost-effectively. Instead, look for facilities with a minimum of 24' clear height or greater depending on your equipment needs, roll stacking, and racking requirements.

Remember to do your homework. Focus on locations with high ceilings, adequate utilities, low impact fees, standard floor slabs, and proper zoning. Also, keep in mind that the existing infrastructure will determine your process flow, so make sure that your desired plant layout fits. If you feel that buying and renovating an existing facility is best for you, great! However, if you feel that something built specific to your unique needs is best, let us continue.

Maybe when your business first opened, the area was primarily industrial, but as the years went on it has become a "high rent district," and you can sell the property for a healthy profit.

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The last thing you want is to find yourself committed to land, only to discover you have not accounted for wetland, stream, floodplains and/or easements on your site.

**BUILD TO SUIT CONSIDERATIONS**

After you have determined you want to build from the ground up, you need to find a location, so you engage with a real estate broker who finds the perfect site for your new construction project: The city wants your business, and the location is excellent, but all too often, rushing into design and construction exposes problems that can mean significant bills and unplanned delays down the road.

To avoid these unplanned expenses and premature spend do these three things before making final decisions:

**1. Find out who the Authority Having Jurisdiction (AHJ) is for zoning procedures**

The Authority Having Jurisdiction refers to the organization, office and/or individual(s) who has the final say over approving the development of a project. The AHJ can come in many forms, including the city, county, or even the state. It is important to recognize that the requirements, incentives, timing, and process can be very different from one AHJ to another, even if they are neighboring AHJ's. Once you have determined the AHJ, clarify requirements and review/approval procedures so that you have a clear understanding of the process needed for approvals and realistic

expectations for breaking ground.

**2. Site Due Diligence**

The last thing you want is to find yourself committed to land, only to discover you have not accounted for wetland, stream, floodplains and/or easements on your site. Other things such as geotechnical, archaeological, and environmental concerns are a major consideration. Left unaccounted for, these elements can mean you will be shelling out more money for potentially significant redesigns and then more for the actual build, along with added time to work through the regulatory processes. Before you head into new territory with design plans, extensive due diligence should be performed. Don't skimp on research; the more you know about your site, the less time you'll spend revising previous layouts and paying for unaccounted-for conditions.

**3. Anticipate Hidden Fees**

Environmental factors, weather, and utility accessibility are some of the potential issues you could find on a site, and all come with large price tags to resolve. Other fees that can pose immediate budget risks can come before a site is even finalized - things like permit, tap, and impact fees are not always obvious but can be significant. It is important to note that these costs do not translate from

market to market. What may be \$500 in one location could be \$50,000 in another, so be sure to ask about these potential fees earlier rather than later.

**DESIGN AND CONSTRUCTION CONSIDERATIONS**

After confirming the land is right for your new building, the fun of designing and constructing your new plant can begin. Suffice to say; there are seemingly endless considerations when it comes to the design and construction of a new plant. Though there are often similarities, no two operations are exactly the same. Some key items to account for in the design are:

**Building Clear Height** - 30'- 36'

**Column Spacing**- 50' x 50' allows for optimization of steel layout and room to operate.

**Electrical Service** - 4,000-8,000AMP+ to power equipment (corrugator, conveyors, converting equipment, scrap/baler systems, boilers, WWT equipment, air compressors, etc.)

**Process Mechanical Utilities** - Steam/ Condensate return, process water, wastewater, compressed air, natural gas, dust collection, scrap system.

**Paving** - Employee parking. Heavy axle weight pavement for roadways and trailer parking. Concrete docks.

**Dock Positions** - 20+ to allow for both inbound and outbound traffic.

You may not find a building that meets your specifications on size and location that also has enough water, sewer, natural gas, or electricity to operate a corrugated or converting facility, and that's fine as long as adequate utilities are nearby and can be brought to the building cost-effectively.



There are seemingly endless considerations when it comes to the design and construction of a new plant.

**Trailer Parking** - Based on operations and service area.

**Concrete Floors** - General production space 7" unreinforced concrete. Roll storage 10" reinforced concrete.

**Equipment foundations** - pits, trenches, etc.

**Building Exterior** - Precast or tilt-wall concrete for a sustainable asset.

**Building HVAC system** - air changes via exhaust/intake air, spot cooling, conditioned spaces, etc.

This is by no means a comprehensive

list or applicable for all operations, and there is no one size fits all. It is essential that you perform a critical assessment of your business and design your new or expanded facility for your current and future needs.

That being said, when the time comes, and you're ready to expand, move, or build, choose a construction partner who is experienced and understands the unique requirements of your corrugated or converting facility.

As a national design-build partner,

ARCO/Murray offers a complete turn-key solution for the corrugated industry. We get involved early and conduct comprehensive due diligence to identify and address risk factors, and we ensure budget, design, and schedule are all harmonized. ■



*Nicholas O'Hare has over 12 years of leadership experience in the architecture/engineering/construction industry. He has*

*successfully developed and led the execution of significant capital programs for Fortune 500 and industry-leading companies across the globe. He can be reached at [nohare@arcomurray.com](mailto:nohare@arcomurray.com) or 331-251-9929.*

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**RICHARD BROWN**  
The BoxMaker  
Seattle, Wash.



**LOUIS DeJESUS**  
CompanyBox  
Charlotte, N.C.



**JUSTIN BEST**  
Precision  
Digital Printing  
Jonesboro, Ark.



**TIM HARRIS**  
ColorHub  
Grand Rapids,  
Mich.

# THE DIGITAL BOX PLANT

THE INTRODUCTION OF HIGH SPEED SINGLE PASS DIGITAL PRESSES OPENED THE DOOR TO NEW OPPORTUNITIES FOR CORRUGATED CONVERTERS. SEVERAL EVEN STARTED SEPARATE BUSINESSES DEDICATED TO THE PROCESS. WE ASKED THE OWNERS OF FOUR COMPANIES TO SHARE THEIR THOUGHTS ABOUT THE MARKET AND THE TECHNOLOGY.

**Early on, you had the foresight to establish a digital corrugated business. What was your motivation for doing so?**

**Richard Brown:** Digital allowed us to expand into the retail packaging and display market and keep manufacturing in-house, rather than contract out projects typically produced as high quality flexo or litho-lam work. Shortly after our initial equipment purchases for corrugated, we expanded our investment by adding an Indigo press for digitally printed labels.

**Tim Harris:** The true motivation was driven by customer demand for lower volume high-end print at an affordable price. With the advent of industrial grade single-pass and high volume multi-pass presses we realized we could make a big leap forward toward current customer goals as well as tap into a new customer base, low volume, that could never be supplied before.

**Louis DeJesus:** I saw digital as a way to give companies true freedom to move through the purchasing process faster than the traditional sales route. I wanted to make it easier for customers to innovate and access the information they needed so they could make the best decision and get the packaging they feel represents their brand.

**Justin Best:** We were excited about the technology – specifically the speed, quality, and agility. We knew that customers would benefit from the ability to have exceptional graphics without the cost or time constraints related to print plates or litho labels. Digital would provide options to fill the gaps and increase plant throughput while offering customers the option to make changes on the fly and see before you buy.

**Who are your customers?**

**Tim Harris:** We structured the business as a trade printer so our customer base is made up of sheet plants, box plants and resellers. The majority of our business is printed sheets that ship directly to our customer's plants for converting. Additionally, we provide digital cutting, diecutting, gluing, and manual services for our reseller or converting customers that may not have the capability or capacity in-house.

**Louis DeJesus:** From brand leaders like Nike, HBO, and Wells Fargo to small digital agencies like BooneOakley. We also partner with many in the food, beverage and beauty industries, like Pura Vida, Molson, Coors, and American Vintners because our C500 is making eco-friendly strides with water-based ink. A great deal of our customers work



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The world's fastest high quality flatbed printer is perfectly constructed to elevate your corrugated packaging portfolio. Give it your displays, shelf-ready packaging and subscription boxes, then kick back and enjoy the show.

in the subscription industry, like Kong Box, or high-end fashion staples Ivy Park, Adidas, Armani, and Arod's Alma Mater to deliver one of a kind unboxing experiences. And don't forget Polaroid and Lowes, who we build POP in-store experiences with. We also tailor to many academic institutions, now that admissions and classes are digital.

**Justin Best:** We are a direct to the trade print organization and offer no converting operations. Our primary customers range from local independent sheet plants to integrated corrugated packaging producers.

**Richard Brown:** We serve trade partners, CPG companies and businesses of all sizes through both The BoxMaker and Fantastapack.com. Our recent acquisition of Tango Press in Bentonville, Ark., expands our geographic reach and enhances our ability to serve both the trade as well as major brands across the United States.

**What are the advantages of an all digital plant?**

**Louis DeJesus:** The companies who use digital packaging have limitless printing capabilities, speed to market and the power to pivot quickly. Pivoting keeps brands relevant.



The BoxMaker's HP PageWide C500 Press

Companies also have the ability to order exact amounts which reduces obsolescence and decreases capital tied up in excess inventory. Our digital facility gives us full transparency of all of our customers. With everything in-house, we can watch an idea go from conception, to finished product. We also have space for other products like tape, tissue, and labels.

**Justin Best:** Many corrugated providers are moving to an all-digital format based on the flexibility and speed to market that digital offers. Our customers do not have to be digital experts and rely on our staff to help them transition current and new business opportunities over to digital.

**Richard Brown:** The digital production workflow eliminates many of the manual steps and costs associated with conventional manufacturing.

Digital print and finishing in combination eliminates both print plates and cutting dies and the associated labor. These benefits also deliver improved sustainability profiles to our clients' packaging. Digitally produced packaging is an ideal fit for CPG brands and rapidly growing businesses who need both speed-to-market and a responsive supply chain. Digital production allows for the optimization of inventory, SKU, and product lifecycle management by empowering companies to order what they want, when they want, and how they want.

**Tim Harris:** The major advantages are cost-effective variability, run sizes, and print sizes. It is now possible to have multiple print versions without plate and setup costs, and it is possible to produce 50 POP displays without tooling pricing. We are no longer constricted by label sizes of 30- x 40-inch or 50- x 80-inch forcing people to decide whether to flood coat and spot label, run multiple labels, or just settle for basic print.

**What equipment do you have?**

**Richard Brown:** The BoxMaker is proud to operate the region's highest capacity plant for digitally produced corrugated packaging and displays, along with offering a high capacity for digitally printed labels. Our equipment includes: The HP PageWide C500 Press (with a second press to be installed in Arkansas in the summer), an HP Scitex 17000 press, two HP



CompanyBox's HP PageWide C500 Press



# SUSTAINABILITY IN A BOX. WOULDN'T THAT BE GREAT?

SETTING NEW STANDARDS IN CIRCULAR ECONOMY: HP PAGEWIDE CORRUGATED TECHNOLOGY.



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Our digital packaging solutions are designed to make printing more sustainable, hence when you go with HP PageWide corrugated technology you promote your sustainability offering too.

SCAN TO LEARN MORE





ColorHub's Barberan single pass printer

Scitex 15500 presses, a fleet of digital CAD tables from Zünd and Esko Kongsberg, as well as two Indigo web presses for label. We are also excited to be installing two Highcon Euclid 5c machines this year, one in our Seattle facility and one in Arkansas, to be followed by a Macarbox Digital LCM as well.

**Tim Harris:** A Barberan single pass printer, a Durst high volume multi-pass printer, multiple Elitron cutters, several rotary diecutters including an 86-inch, a Lamina gluer, other finishing equipment, and other investments not yet announced.

**Louis DeJesus:** CompanyBox currently has one HP Pagewidth C500 and we recently announced the purchase of our second C500 which should be installed this summer. We also have an HP Scitex 17000 and 15000, three Zund BHS cutters, and a Vega specialty folder-gluer for auto bottoms and returnable packaging. The Vega allows us to apply adhesive sealing tape to our mailers and patented Snap2Pack at 20,000 pieces an hour.

**Justin Best:** We are running the EFI Nozomi C18000 – it is literally the only machine on the floor.

#### What was the biggest challenge when setting up your company?

**Justin Best:** A misconception is that these machines are plug-and-play. To some extent that is true, however, this technology requires extensive training and a broad understanding

of its limitations. Having a successful team of operators who understand the printer and its capabilities is key. One of the biggest challenges was getting our customers to think outside the brown box and understand how to sell digital.

**Richard Brown:** Implementing a digital print workflow has required a significant investment in technology, which includes equipment, software, and talent.

**Tim Harris:** The technical complexities that are unique to inkjet printing on corrugated. Sure corrugated printing and single pass inkjet digital existed before this but the two had never mixed in true production form. We were one of the first companies in North America to install a single pass corrugated press. Much of the technical knowledge did not exist. We could not simply learn from previous industry experts. We were forced to learn a lot through trial and error. At the time there was the idea by many that the technology was essentially plug-n-play. That is a misnomer. Operating a digital press is quite different than operating a six-color flexo press; however, it is not without the need for well-trained skilled operators, maintenance staff, and continued investments.

**Louis DeJesus:** Our biggest challenge was how long it took to develop our end-to-end e-commerce experience for customers. It requires a huge amount of time and a lot of skill. Then add in the cost and maintenance. I

wasn't fully prepared for the tech aspect of our business, but we are now.

#### Is this the future of corrugated?

**Richard Brown:** Absolutely. Consumer expectations of packaging (and therefore brand expectations) have grown significantly in the past decade and will only continue to climb. As technology allows brands to deliver personalization and customized experiences across a variety of media, it only makes sense that consumers will come to expect this from their product packaging as well.

**Louis DeJesus:** Yes. The packaging industry is at a crossroads. Companies need to embrace this technology and those who don't will get left behind. Think about companies like Kodak, Blockbuster and BlackBerry that refused to see what was coming and failed to pivot. The corrugated industry needs to be thinking about what digital transformation looks like and start taking the steps to get there. Jack Welch said it best, "When the rate of change inside an organization becomes slower than the rate of change outside, the end is in sight – the only question is when!" Remember, just because a start-up is small, don't underestimate the leveling impact of new ideas, new ways of selling, producing and interacting with the customer. Tesla never built a car and now has a market cap of all the car manufacturers combined.

**Justin Best:** Speed and agility is the way of the future. With the "I need it now" mentality and to keep up with the ever-changing trends in design and pop culture, digital offers the most flexible option allowing customers to be extremely agile. From the time we receive approved artwork, we can begin printing the job in as little as five minutes and ship same day. We have had customers call while doing our quality check on the setup of the job with an art change, we made

the change, had it approved, and started printing the updated artwork in as little as 25 minutes.

**Tim Harris:** Digital printing is here to stay. Is it the future? I would not go so far as to say it will replace all other forms of print or finishing. It depends on which sector of the industry you are looking at. Digital provides process efficiencies that you simply cannot come close to achieving with analog. Marketing teams have learned to leverage the benefits of digital print by incorporating versioning and variable data into their marketing strategy. This will drive the increase in market share for digital. That said, there are many applications for which our industry should and will continue to make significant investments in analog technology. I do not see it going away in the near term. ■



Precision Digital Printing's EFI Nozomi C18000

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# DIGITAL READOUTS AND SENSORS

WEEKLY CLEANING AND CALIBRATING ARE ESSENTIAL.

BY WAYNE PORELL  
HARPERLOVE



To monitor corrugator conditions and produce high-quality, flat, dry board, today's corrugator operators can no longer break the plane of the machine to examine the board. Operators must rely on sensors and digital readouts for everything from

starch gaps to temperature settings. The temperature and gap sensors should be cleaned and calibrated on a weekly basis to ensure they provide accurate information.

The sensors must be cleaned with a rag and a non-flammable cleaner to remove not only dust

but also moisture and accumulated fibers. This should be part of the weekly preventive maintenance schedule that is performed while the machine is down and locked out. The cleaning procedure should be clearly documented for the crews with pictures to help them identify all the sensors' locations and the specific parts that should be cleaned.

#### Gap Sensors

When the readout for the gap between the glue roll and metering roll is incorrect, you may be applying more or less starch than you intend. Less starch being applied can result in a weak bond creating delamination issues or zipper board. Sometimes the crew won't identify this issue until the board is cured in the stack. When the board is still hot off the corrugator, it can have a moisture bond until it cures and cools, then it pulls apart easily. When the machine is applying more starch than optimal, it will produce

The cleaning procedure should be clearly documented for the crews with pictures to help them identify all the sensors' locations.



Dirty temperature sensor

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### FIBERWELD™

- **BoardLok™**

Corrugator starch additives for multiwall and heavy weight board.

Speed and bond improvements.

- **TabLok™ and SheetLok™**

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Clean temperature sensor

a wet sheet which can result in warp issues.

The board may be flat as it comes off the corrugator, but when the starch dries it pulls the board in the wettest direction due to the starch not being fully gelled. Corrugator crews generally respond to wet board by adding more heat which can overly dry the liner and lead to score cracking. It also can cause washboarding and result in a poor print surface for the converting equipment.

Inaccuracy of the digital readout for the gap between the glue roll and lower corrugating roll can lead to fractured flutes if the actual gap is smaller than expected. If the caliper of the medium is 0.009" and the gap is set at 0.004", the medium must get crushed to fit through the gap, and this may result in fracturing at the flute tips.

When the medium fractures, starch is absorbed in the fractures instead of sitting on the flute tips. This can lead to directional fiber tear issues, zipper board, or the sheet just falling apart

When the readout for the gap between the glue roll and metering roll is incorrect, you may be applying more or less starch than you intend.

leaving the machine at high speeds. When the gap between the glue roll and the corrugating roll is wider than optimal, it can result in spotty glue lines. If the crew misinterprets the cause of the spotty glue lines, they may add starch which then leads to slinging, wet board, and post warp issues.

#### Temperature Sensors

If the temperature sensors aren't reading correctly, the preheaters or preconditioners will not respond appropriately and the liner and medium entering the machine won't be conditioned correctly. When you don't get enough heat on the liner it

can result in delamination, or a green bond which allows the slitter blades to pull the bottom liner away from the medium resulting in edge delamination. This can also result in up warp. When you have too much heat applied to the bottom liner, it can cause a shallow bond from the starch not adequately penetrating the liner. This can also lead to zipper board, up warp, and cracked scores from taking too much moisture out of the paper. In some instances, taking too much moisture out of the liner will cause side-to-side or end-to-end warp because of paper shrinkage. ■



Wayne Porell has more than 40 years of corrugated industry experience. He is a Senior Technical Representative serving customers primarily in the Northeast where he has helped numerous plants with corrugator issues and improved their waste, productivity and quality.

# TAPPI Corrugated NEWS

## MEET THE CLASS OF 2021 TAPPI FELLOWS



ALSO:  
TAPPI MEMBER SPOTLIGHT  
**LENA SHARESKY**

### TAPPI Calendar of Events

#### SuperCorrExpo® Service Talks

Coming late Spring  
www.supercorrexpo.org

#### Corrugated Technical Committee

March 10, 2021  
Virtually via Zoom

#### Corrugated Technical Committee

March 30, 2021  
Virtually via Zoom

### Corrugated Packaging Division Council

#### Appointed Members:

**Greg Arvanigian**  
President  
Arvco Container Corporation

**Craig Hoyt**  
CEO  
Buckeye Boxes Inc

**Bert Hurler**  
Manager, Engineering & Capital Purchasing  
International Paper

**Michael Martin**  
VP Engineering Services  
WestRock

**Josh Reich**  
Sales & Customer Service Manager  
Greif, Inc

**Glenn Rogers**  
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 Staal**  
Corporate Quality Manager  
Advance Packaging Corporation

**Mike Kohler** (Young Professional Liaison)  
Vice President Sales  
Kohler Coating

### Division Leadership

**Corrugated Division Chairman**  
**Jeff Quinn**  
VP of Operations  
The Haire Group

**Corrugated Division Vice-chair and  
Technical Program Chair**  
**Ed Stuczynski**  
Director of Engineering  
Menasha Packaging

**Division Chair Emeritus & Awards Chair**  
**Ell Townsend**  
Director of Manufacturing Services  
Packaging Corporation of America

**TAPPI President & CEO**  
**Larry Montague**

**TAPPI Corrugated Packaging Division  
Account Manager**  
**Kristi Ledbetter**



# TAPPI FELLOWS

## 2021 TAPPI Fellows Announced

**Honorary title given to extraordinary contributors**

The following individuals have been named 2021 TAPPI Fellows and will be honored during TAPPICon LIVE!, October 3-6, 2021 in Atlanta, GA USA. Fellow is an honorary title bestowed upon a small percentage of TAPPI's membership and is given to individuals who have made extraordinary technical or service contributions to the industry and/or the Association.

Each year, the Association may elect members as TAPPI Fellows in recognition of meritorious service to the Association and the

industry. The title Fellow is also conferred upon TAPPI Board chairs, vice chairs, and directors at the end of their terms of office, and upon Gunnar Nicholson Gold Medal Awardees and Herman L. Joachim Distinguished Service Recipients.

This prestigious group will be honored at the Fellows Luncheon during the TAPPICon LIVE! conference, October 3-6, 2021 in Atlanta, GA, USA.



**Mary Beth Cornell**

Membership and Global Development Director, TAPPI



**Carrie Enos**

President, University of Maine Pulp and Paper Foundation



**Benjamin Frank, Ph.D.**

Director-Materials Research and Innovation, Packaging Corporation of America (PCA), and recipient of the 2021 Gunnar Nicholson Gold Medal Award



**Glenn Hanson III**

Technical Sales Support – North and Central America  
Metso Outotec



**Donald F. Hiscock**

Retired, Former Director, Innovation and Business Development, CP Kelco



**D. Steven Keller**

Professor, Miami University



**Femi Kotoye, Ph.D.**

Retired, Dow



**Lokendra Pal, Ph.D.**

Professor, North Carolina State University



**Scott Rosencrance, Ph.D.**

Regional Director, Kemira Chemicals



**Matthew A. Szymanski**

Vice President of Mill Operations, Green Bay Packaging



## DEBUTS AT SUPERCORREXPO® 2021

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Entries due by July 9, 2021

For complete details, please visit: [supercorrexpo.org/bmo](http://supercorrexpo.org/bmo)



## TAPPI CORRUGATED PACKAGING DIVISION

### TAPPI MEMBER SPOGLIGHT

# LENA SHARESKY

Sales Representative for Packaging Corporation of America

**T**here's no denying that nowadays sustainability is a key factor in many young professionals' career choices. TAPPI Member Lena Sharesky is no exception.

It's one of the main reasons she's currently a Sales Representative for Packaging Corporation of America (PCA). "There are just so many creative ways that the paper and packaging industry is introducing sustainable alternatives into the business/consumer pipeline and PCA is right there leading the way," she said.

According to one of the industry's leading trade organizations, America's forest products industry indirectly employs approximately 950,000 men and women with sustainability as a key principle: producing recyclable products from a renewable resource. For a generation of new professionals, does protecting and preserving the environment get any better than this?

As a student at Monmouth University in New Jersey (where she graduated with both a Bachelor's and Master's in Business Administration), Lena was actively engaged in numerous extracurricular and community-based efforts – a tradition she continues today both through her alma mater and TAPPI. A member since 2018, she currently serves as the Director of Events for the Young Professionals (YP) Division, and is an active participant on the TAPPICon 2021 Steering Committee, helping to plan program offerings for YP attendees. She was also a participant in TAPPI's Mentor Match program, and is actively engaged in creating numerous YP Webinars and standalone social programming focused on connecting YPs around the globe.

#### Q. What prompted you to join TAPPI?

**A.** When I began my career in the corrugate industry, I looked for opportunities to network and gain industry knowledge as my background thus far was primarily in digital marketing. During my search, I came across TAPPI and because of its program offerings and networking opportunities, I felt it would be a great asset as I began my career in the industry. That certainly turned out to be true.

#### Q. Please describe your involvement with TAPPI.

**A.** I currently serve as Director of Events for the TAPPI YP Division, but I am also involved on the TAPPICon 2021 Steering Committee where I help manage events planned for all YP attendees. I also participated in and helped organize the Generational Workforce session at the 2020 PIMA Virtual Conference held in September. Focused on retaining young industry talent, attendees left the session with data and ideas that could be applied personally or within their own companies.

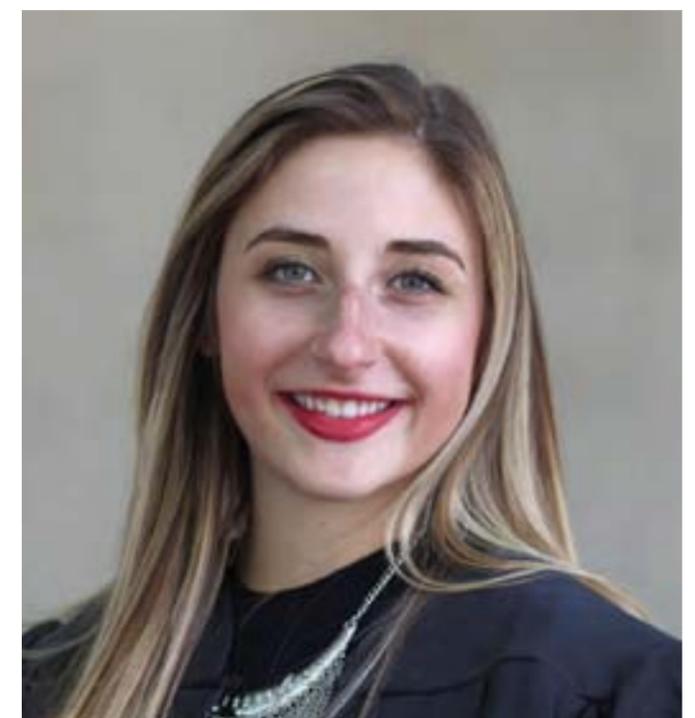
#### Q. How has being a member of TAPPI assisted you professionally?

**A.** I have benefited learning from other individuals in the corrugate and related paper/packaging industries. It's especially important and valuable during the early stages of your career to gain as much information as possible. For me, especially this year dealing with the effects of COVID, which is new territory for all of us, learning from others and their experiences has been very beneficial.

#### Q. What has been your experience using TAPPI resources?

**A.** TAPPI Connect and the Mentor Match program have been great. I've been able to glean insight from others as it relates to building soft skills. As a protégé in Mentor Match, I was able to connect with an experienced professional outside my industry who provided me with a broader viewpoint which helped as I navigated the beginning of my career.

I also use TAPPI publications to stay informed about what is going on in the paper/packaging industries as a whole. This helps me apply that knowledge both internally/externally, and provides additional benefits.





## TAPPI CORRUGATED PACKAGING DIVISION

### Q. What is a fun fact about you and/or any personal hobbies and activities?

**A.** Fun fact: I was Miss Maryland High School America 2013. As far as activities, outside of work I enjoy staying active through working out, doing yoga, getting outside to enjoy the nice weather and traveling to new places (pre-COVID of course!).

Through my alma mater, Monmouth University, this will be my third consecutive year serving as a mentor for the Student Enrichment & Engagement thru Mentoring Activities (SEEMA). The Leon Hess Business School program provides selected students an opportunity to apply career development skills beyond the classroom while building relationships with their professional mentor.

In addition, I am also the U.S. Advocacy Volunteer Coordinator for Days for Girls International, an organization dedicated to increasing access to menstrual care and education and innovating sustainable solutions that shatter stigmas and limitations for menstruators.

### Q. Favorite paper product and thoughts on most significant breakthroughs in our industry?

**A.** The advancements in using paper products to eliminate the use of plastic is a significant contribution and one of my personal

favorite packaging products. From creating paper bottle alternatives to redesigning beverage packaging to eliminating plastic rings, the paper and packaging industry as a whole is highlighting their dedication to sustainability, as well as their commitment to forward thinking as they develop these innovative solutions.

### Q. Closing thoughts on TAPPI membership?

**A.** TAPPI has allowed me to build relationships outside of the corrugated industry which has been extremely beneficial. Through the Mentor Match Program and through serving as Director of Events on the TAPPI YP Board, I've networked and learned from peers and experienced industry professionals in various meetings. I've also learned from keynote addresses at TAPPI virtual events, all of which have helped me to grow as an individual. I am looking forward to continuing to build these relationships and begin meeting everyone in-person at various conferences and events once it is safe to do so.



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# A TWO WAY STREET

HOW BOBST IS SUPPORTING CONVERTERS WITH THE ONGOING DEMANDS FOR CORRUGATED PACKAGING.

**K**ey trends in the packaging sector put many demands on converters and brand owners alike. New customer preferences and shopping behaviors, along with a surge of regulatory sustainability targets, are changing the market. The need for shorter time to market and faster delivery are additional factors putting increasing pressure on costs. In order to respond to and survive these challenges, the corrugated sector must produce high-quality packaging with short lead times.

As an equipment manufacturer, BOBST works hand-in-hand with converters to enable them to produce fault-free packaging and satisfy the needs of their customers. The company has been spearheading innovation in the flexo post-print arena for more than four decades, developing sheet-fed printing

and converting equipment for the production of high-quality printed corrugated board.

To continue this process, Bobst is building its future vision of the packaging industry on four pillars – digitalization, connectivity, automation and sustainability to offer the highest productivity – sustainable production and predictable results.

### Tools for Success

“In order to produce the highest quality graphics when printing flexo onto corrugated board, there are three crucial elements to consider – the printing machine itself, the consumables and the production team,” states Guillaume Martin-Bastenaire, Printing Process Expert, Bobst Lyon. “Those elements must work together in harmony to overcome the specific challenges of this process and meet

the needs of the customers in the post-print flexo sector.”

Bobst offers two levels of print quality for its inline solutions, which can be fitted with either ‘High Graphics’ or ‘THQ (Très Haute Qualité) FlexoCloud’ technology to give converters the tools to produce exceptional flexo post-print jobs and increase their market share.

High Graphics mode offers super sharp images and high-density colors in one pass to meet brand owners’ demands for outstanding visual appeal and match color targets. Meanwhile, the oneECG THQ technology takes print quality to the next level while also meeting sustainability targets through its use of extended color gamut printing.

The oneECG THQ technology uses a fixed set of colors, which reduces production costs by saving on ink and

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“In order to produce the highest quality graphics when printing flexo onto corrugated board, there are three crucial elements to consider – the printing machine itself, the consumables and the production team.”

GUILLAUME MARTIN-BASTENAIRE, PRINTING PROCESS EXPERT, BOBST LYON

other consumables and also minimizes the number of changeovers and downtime. Printing in CMYK will cover 65% of the color gamut. This can be increased to 90% with an expanded ink set where three colors, typically orange, green, and violet, are added to CMYK.

#### Automating for Precision

Bobst says its technology innovations are improving quality and productivity across the process, giving converters a competitive edge. Higher automation on machine means faster setups, excellent registration, highest color accuracy and perfect sheet handling and positioning, resulting in savings in waste and time for more sustainable production.

Take registration as an example. Bobst has developed REGISTRON S6500, a user-friendly, high-quality sheet-positioning system with easy set-up. Accuracy of the sheet transportation through the machine also guarantees the registration value color to color to achieve a better printing quality with clearer images. This can be combined with the Start&Go system, which offers fast automatic set-up at the start of each job in just a few sheets.

Olivier Robin, Sales Director, Bobst Lyon, explained, “Thanks to our control management and corrective systems, we can guarantee perfect sheet positioning in each printing unit. At the start of the job, Registron S6500 automatically sets up cross and longitudinal register values for each color to guarantee the best printing quality from the first sheet. It also adjusts skewing and printing length for each unit to save on production time and provide support for multi-color jobs.”

Every little detail counts and all elements of the printing process must be monitored. For instance, the precision and repeatability of cylinder calibration is vital – an anilox roller in the wrong position or excessive pressure on the printing plate will adversely affect quality. Therefore, Bobst manufactures its own cylinders to guarantee perfect geometry both along and around the cylinder. Cylinder positioning in the machine is precise and repeatable to within 0.01mm to help the operator achieve best machine setup.

#### Partnerships for the Benefit of all

Exceptional technology and innovative solutions are only part of

the equation. Customer sales support and service is equally important to ensure converters optimize the potential of their machinery. Bobst has a team of training and printing process specialists available for sharing skills and expertise in flexographic printing. Its Competence Center in Lyon has a special focus on flexographic corrugated post-print and offers specific process training on press and in converting, including printing, diecutting, and more, all adapted to customers’ needs and demands.

Customers can also access training and support remotely through the MyBOBST dedicated online portal, where they can also monitor real-time machine data, access technical information and order spare parts. This online interface offers significant time savings and is available 24/7.

Helping to further cooperate in the industry for the benefit of all parts of the supply chain, the Lyon Competence Center works closely with a number of ink, printing plate, and other consumables suppliers to improve the process, validate new technical solutions, exchange knowledge and participate in customer training.

Robin concluded, “As a machine manufacturer, we work hard every day to guarantee the best quality of our printing machines, support customers and enable them to stay ahead of the competition, as well as capitalizing on industry knowledge and sharing it in order to enrich the printing process for all parties involved. We work in partnership with converters and other suppliers, and together we are shaping the future of packaging.” ■



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# MATT REDDINGTON VERITIV

WE ASK THE QUESTIONS...



**M**att Reddington is the Director of Global Design at Veritiv in Atlanta, Ga. He leads a 100-person organization that works with a wide variety of substrates. “We design in corrugated, folding carton, molded fiber, glass and plastics – the sky is the limit. We like to say we are material agnostic.” He also oversees Vine – a new brand and packaging design agency focusing on brand strategy and bringing that to life through well-designed, and manufacturable, packaging solutions.

**How does Veritiv work or collaborate with corrugated box manufacturers?**

We are one of the largest buyers of paper and packaging in North America. The International Paper’s and WestRock’s of the world are our customers and we are their customers as well. We sit between the manufacturers and the brands, and fill that supply chain need. The value comes from us being able to bundle all of those needs together for palletized packaging as well as primary, secondary or tertiary packaging.

**What trends are you seeing in packaging?**

The biggest is COVID and the further drive to e-commerce. Earlier last year you probably saw more small boxes showing up on your doorstep than the traditional oversized Amazon box with the extra dunnage. Now you’re seeing less of those. I

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It is the corrugated manufacturer's and designer's role to understand the product's supply chain logistics, and design the box to meet those needs.

recently received a lemon press in a box from Amazon that was 18 by 12 by 6 inches, and that was the only item in the box. The reason for this is that there is not enough capacity in the market to run those small boxes, so we're seeing overpacking. That really plays into another trend, where everybody is focused on dimensional weights, trying to right-size their product to avoid FedEx's and UPS's new rate system. Personalization and beautification around boxing is another trend because so much fulfillment now is going D2C versus B2B.

**How do you help your customers optimize their packaging and meet the guidelines required by companies like Amazon?**

Veritiv is a partner in Amazon's APASS program, which is their certification program to be either SIOC (ship in

"We've actually had several customers where it does not make sense to go through SIOC certification because they're not selling enough volume on Amazon."

own container) or frustration free. Then it's working with our customers to understand what they're paying, from a fees perspective. We've actually had several customers where it does not make sense to go through SIOC certification because they're not selling enough volume on Amazon. It's cheaper for them to pay the fee and then comply on the larger items. For instance, if it's going to cost you \$2000 to buy new tooling for your packaging and \$1000 to get certified, you have to sell 1500 units in a year before you break even. Some folks are trying to drive that to

their personalized web site. A good example is a company selling saw blades and they had a plethora of SKUs but there were only about 10 that provided the bulk of their volume, so they elected to take a few of the SKUs off the Amazon web site and sell them directly from their web site or create a bundle kit to drive some volume and get that certified. It didn't make much sense for them to change that packaging, and still continue to sell through Amazon.

One challenge with Amazon, even if you become SIOC compliant, is your inability to fully brand the outside

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Precision	Printing Tolerance ±0.3mm			
	Nonstop Order Change			

Vine and Terra Kaffe partnered to create a luxury un-boxing experience to win over the consumer.



“Because we’ve become so accustomed to shopping online, the popularity of e-commerce will continue.”

of that package. Everything has to be branded on the inside because Amazon wants to display that it’s coming from Amazon. Companies are trying to figure out ‘Can we ship this ourselves? Can we sell this through our own e-commerce channel, through Instagram or Facebook?’.

**E-commerce packaging is surging as a result of the global pandemic. This is a major opportunity for board converters, but there have been some challenges with damaged product and overpacking. How can board converters help their customers achieve success with their e-commerce packaging?**

A couple of things can happen and I don’t think any of them can occur overnight. One would be more capacity in the small box market, which will probably require a 12- to

18-month lead time, betting that the economy stays in a D2C type model. There’s a limitation on smaller boxes, which is why you’re seeing extra protective packaging or dunnage. The other piece of that would be making it easier for all the packaging to be recycled. The corrugated industry has a great story to tell, but if I could change one thing, it would be how can the industry better educate the consumer around the benefits of recycling, or how could we get the U.S. to be more like Canada, where you pay for trash, and recycling is free. It’s part of your civic duty to recycle.

Getting back to overpacking, it is the corrugated manufacturer’s and designer’s role to understand the product’s supply chain logistics, and design the box to meet those needs. In many cases a designer doesn’t know the transportation means,

so inevitably they are designing potentially more cost into that item.

**Any examples of successful corrugated designs?**

There are a lot of ‘corru-gamis,’ or folded diecut corrugated pieces added to boxes. I’ve also seen some fantastic creative displays for string trimmers for Stihl or Ryobi in Home Depot. All of the packaging is corrugated and flexo printed. The designers understood fully what the brand was trying to achieve. It’s that missing piece of information where you end up with extra dunnage. The push to the brands would be – and this is a little bit of an Amazon piece – if we can figure out how to get everything to ship in its own container from the manufacturer, that’s where you can avoid a lot of this overpacking.

**Will the surge in e-commerce continue once the pandemic is over?**

I believe it will. We’ll see some fall off because we are naturally going to want to get out of captivity, and get back into society and mingle, but because we’ve become so accustomed to shopping online, the popularity of e-commerce will continue. The supply chain we’re in today, although it may not be perfect, is going to be the supply chain that we’re looking at moving forward as we’re trying to progress things globally on a much faster scale and much more individualized. We’ve seen a lot of brands come to Vine with the challenge of how to get the experience that his customer used to get at XYZ retail store. How do we communicate that brand’s story because we don’t have all the signage

“The corrugated industry has a great story to tell, but if I could change one thing, it would be how can the industry better educate the consumer around the benefits of recycling.”

“We have a lot of old equipment in the U.S. In the next 10 years you’re going to see a lot needing to be replaced and that’s where digital is going to make that move.”

or in-store associates? And once we’ve attracted them how do we retain them? You’re now seeing terms that we’ve been using in design for a while like ‘Instagramable’ or ‘Instagram-worthy’ packaging. And there’s the expectation of sustainability built into that as well with the millennials becoming such a large buying group.

**Any thoughts on digital technology? Will it be the dominant printing process for the retail supply chain?**

We’re predominantly flexo, and I think that’s going to remain for some time until we get out of this sourcing terminology of a purchase price variance. Digital in the short term will be more expensive than flexo but what it gives the brand is the ability to connect better with consumers. When using digital for more small scale or unique brands the cost is offset in that brand loyalty. Companies are looking at ways to reach consumers on a more individualized basis. Digital printing’s variability of being able to change on the fly is a benefit. The downside is that there is not enough digital printing capacity and the cost variance with flexo is too far apart, but I believe that will close. At some point in time we could be 100% digital. We have a lot of old equipment in the U.S. In the next 10 years you’re going to see a lot needing to be replaced and that’s where digital is going to make that move. ■

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# COWAN GRAPHICS DIVERSIFIES

WITH NEW FUJIFILM INCA ONSETX3 HS DIGITAL PRINTER

Cowan Graphics Inc., a family owned business for 75 years located in Edmonton, Alberta, Canada, has installed an Inca OnsetX3 HS from Fujifilm North America Corporation, Graphic Systems Division. Cowan Graphics provides businesses of all sizes an extensive offering of corporate branding services including building signage, vehicle wraps/graphics, indoor/outdoor banners, murals,

decals, retail/event signage, and specialty items.

The addition of the OnsetX3 HS digital printer has allowed the company to diversify product offerings including packaging capabilities, specifically regarding the ability to print on corrugated boards, as well as developing free standing display units, short run specialty packaging, and more. This enabled the company to handle new and

different requests from current and new customers, accelerating business growth.

“As one of the largest digital and screen printing companies in Canada, we monitor industry trends and adapt practices to identify ways to help improve our customers printing and packaging needs,” says Blaine MacMillan, President and co-owner, Cowan Graphics, Inc. “We’re pleased to service our customers via Fujifilm’s

OnsetX3 HS, which allows us to print high volume, quality images onto a wide variety of media. It’s important to have the right technology available that can keep up with market demand and that can also offer diverse products, personalized prints, packaging and display options with a fast-turnaround time.”

Companies like Cowan are innovators in their field by recognizing and embracing the need for technology that expands and diversifies their product offerings. The Specialty Graphic Imaging Association (SGIA) announced in a 2019 report that many industry professionals have identified opportunities to better serve their customers with services outside of their primary offerings, with 95% reporting there is opportunity for

“In accommodating the diverse offerings of fast-turnaround, short-run work, the OnsetX3 HS has more than stood up to the challenge for us,” says Blaine Macmillan.

expansion within their own businesses, and 93% saying they believe expansion is happening within the industry as a whole. Not surprisingly, many printers are adopting new technologies and expanding services to remain competitive.

As customer deadlines continued to shorten and requests for personalized services expanded, finding a high-quality, efficient and reliable printer that could produce images on a wide variety of media was critical for the long-term growth of Cowan Graphics.

“With our engineering, fabrication, installation, and graphic design teams in place, Cowan Graphics had most of the right resources to push the envelope with our offerings. However, we needed a reliable printing solution to keep up with our expansion efforts and also be able to create new, diverse offerings that would appeal to our customers,” says MacMillan. “It was important for our business to invest in the right printing solution and we knew Fujifilm would be the right partner for us.

“In accommodating the diverse offerings of fast-turnaround, short-run work, the OnsetX3 HS has more than stood up to the challenge for us,” MacMillan adds. “The increase in overall productivity, made possible by advances in printing speed and quality thanks to the Fujifilm OnsetX3 HS, allow Cowan Graphic customers to stand out among the crowd with unique graphic solutions.” ■



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# ISTA LAUNCHES ONLINE TEST PLATFORM

PACKSIGHT STREAMLINES TESTING, ALLOWING FOR MORE TIME DEVELOPING CUSTOMER SOLUTIONS.

BY ANDREW J. GRUBER  
ISTA

ISTA published its first test procedure, "Project 1A," in 1948. Since that time, we've seen great advances in technology and supply chains, and as a result, testing has become more sophisticated and complex. However, the mechanism

for delivering and interacting with those tests (static printed documents or PDFs distributed via mail or email) remained largely unchanged over that same time frame. ISTA's new online platform, PackSight, addresses this issue by delivering packaged-

product specific test plans to users online at the touch of a button and much more. As ISTA looked to leverage technology to create a digital version of ISTA protocols, we acknowledged the need for a technology partner

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Users simply enter basic package information and PackSight generates the right test path to perform.

that had a deep understanding of, and roots in, packaging. We found that partner in Specright, whose cloud-based specification data management platform is used by leading packaging professionals to manage packaging and product specifications. Like ISTA, Specright had experience transforming an industry, and the partnership to create PackSight was born.

**Why Digital Test Protocols?**

**Speed:** PackSight allows users to move through test procedures without double checking ISTA protocols. Previously, ISTA tests were typically printed out, completed by hand or documented in spreadsheets, and then stored for record keeping. Packaging engineers and lab technicians were required to sort through available protocols, determine the right test plan based on their package type and requirements, print out their test plan, complete the test, and compile the report. Now users simply enter basic package information and PackSight generates the right test path to perform. Users can then select a step-by-step or short test plan to complete tests. In the step-by-step version, users are walked through the test protocol, and given helpful tips and detailed instructions for each test block. In the short test plan, users see a streamlined view of the test blocks, which hides the information they already know, and allows them to quickly and efficiently complete a test on a single screen.

A critical part of testing includes documenting results. Now, users can document tests in real-time using their phones or tablets and take and



PackSight being used by ISTA member Advance Packaging Corp. in Grand Rapids, Mich.

upload pictures as they go. No more taking pictures, uploading them from a camera or emailing them, and then embedding them in PDFs. Users can also leverage the desktop version of PackSight to complete tests. For example, users can select the test through their laptops and add photos later using their mobile or tablet devices.

In some instances, labs may not have access to devices like tablets, cell phones or computers. In this instance, users can select and print out a packaged-product specific test plan directly from PackSight and complete by hand.

**Accuracy:** PackSight guides you through the procedures, preventing mistakes and ensuring compliance with ISTA tests. As packaging became more complex, it became increasingly

difficult for packaging engineers to select the right test. Furthermore, compiling test reports could take hours. With each protocol consisting of roughly 8-52 pages, packaging engineers had to keep track of where they were in the testing process to move through protocols. One missed step could result in an inaccurate test.

**Reporting & Storage:** One of the major benefits is automatic report generation, which previously could take hours when done manually. Users can auto-generate reports within the platform based on their inputs and documentation during testing. Within seconds, users can have a custom-branded PDF or digital version of their test, stored within PackSight for historical tracking and reporting. This gives brands digital access to all the tests they have run and lets

One of the major benefits is automatic report generation, which previously could take hours when done manually.

them leverage reporting to predict results and best tests to use over time. International brands can easily collaborate with stakeholders across the globe while gaining visibility into test statuses. It also helps brands and suppliers accelerate their speed-to-market. And with access to easier and faster test processes, package testing and product development times can decrease without compromising quality.

**Just The beginning**

While the benefits discussed above are foundational elements, PackSight, alongside supply chains, technology, and testing, will continue to evolve. On the horizon are items such as user configurable test planning, analytics and recommendations on testing, continuous improvement based upon user feedback. All these elements will facilitate greater testing resolution at a company level and provide quicker access to newly developed data sources. These are key elements accelerating ISTA towards fulfilling its mission of empowering organizations and their people to minimize product damage throughout distribution and optimize resource usage through effective package design. ■

For more information, visit [ISTA.org/PackSight](http://ISTA.org/PackSight)



Andrew J. Gruber is President and CEO of ISTA (International Safe Transit Association), a non-profit, member driven association for the packaging and logistics sectors. It is a

leading industry developer of testing protocols and design standards that define how packaging should perform in transit. Members include product

manufacturers, carriers, suppliers, testing laboratories and educational and research institutions. For more information, visit [www.ista.org](http://www.ista.org)

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# The Encore FD 618

HAIRE GROUP'S NEW SET-UP-WHILE-RUN FLEXO FOLDER-GLUER



Undoubtedly, many of you have seen ads teasing the upcoming reveal of something new from Haire Group. The industry has been abuzz wondering what it is, and we were all very excited to unveil it at SuperCorrExpo 2020. Unfortunately, COVID 19 had other plans. Fortunately, this spotlight provided the perfect opportunity for an unveiling. Without further ado, Haire Group is proud to introduce its newest machine - straight from Italy, the new Encore FD 618.

When adding to our offerings, we were looking for a machine that would help our customers achieve even greater production efficiencies and make a better product, including dual liner printing in one pass, increased uptime, flexibility, and lower cost of ownership - quite a tall order. The Encore 618 delivered on all fronts. When we began receiving orders before its introduction, we knew that the Encore 618 was going to take the industry by storm.

The Encore FD 618 employs the latest technology - truly evolutionary excellence - in a set-up-while-run flexo folder-gluer made in Bologna, Italy. Utilizing talent from the area famous for Ferrari, Ducati and Maserati, this machine was designed to increase efficiency and productivity



Servo technology provides significant advantages for this "mini."

while also expanding capabilities to include much broader, single pass top and bottom liner printing - everything our customers need to keep their customers coming back for more.

This state-of-the-art flexo folder-gluer is versatile and delivers exceptional quality products with every pass. It comes loaded with fantastic features within the standard machine.

#### Key Features

- Servo technology provides significant advantages for this "mini." All the control axis are operated by the same "smart" mini servo motor, simplifying maintenance, making inventory control easy with fewer motors and parts to stock.
- The vacuum transfer machine is modular and fully scalable. Because it does not run on a "carpet," additional units can be added as customer business needs change and grow.
- A "no crush" feeder reduces board crush - requiring no operator intervention.

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The machine offers dual liner printing in one pass, increased uptime, flexibility, and lower cost of ownership.

- The 'closed loop' dust management system recirculates clean air in the print units, providing a superior print and less downtime for plate cleaning.
- One-to-one dual scoring creates consistent scoring while also offering offset scoring.
- The diecutter design allows for more complex value-added business.
- A new "Scissor" servo glue tab cutter eliminates knife changes and provides a cleaner and more positive cut.
- All units on the machine can move for easy maintenance and cleaning.

ongoing partnership with Haire Group whose service arm DFA offers 24/7 service and support and has proven to lower cost of ownership. And, because DFA is not promoting proprietary parts, you can trust that we will help source local parts whenever possible.

Haire Group has always provided customers with inclusive pricing. The price includes the machine, transit to our plant, and training. There are no surprises when working with the Haire team.

As a Haire customer, you know the team that will be supporting your throughout the lifetime of your machine. Haire Group (DFA) factory-trained technicians provide all service and support. Parts are stocked locally in Haire's facility just outside of Chicago.

Customers looking for a new, mini flexo folder-gluer should put the Encore FD 618 from Haire Group on their list. The Encore FD 618 made residence in the Haire New Machinery Showroom & Training Center in early 2020. To keep up with demand, that machine has already been sold and another is en route to be on site for viewing and training. As always, we encourage current and potential customers to visit Haire or take advantage of our Haire Vision virtual, hands-on machine inspection to see first-hand what the Encore FD 618 can do for their business. ■

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# Glue Melter Series

The new EcoStitch™ melter series from Valco Melton is intelligent, versatile and technologically advanced, with Ethernet IP integration, digital pressure control, adhesive usage data available on screen and full OEM integration with all digital based data. Each melter has many state-of-the-art features and options. The melters do not require compressed air and use precision gear pumps to deliver adhesive in a constant, reliable and repeatable fashion. There are four pump size options to fit specific application requirements. Digital closed loop pressure control is said to be an industry first for food and beverage packaging glue melters. Now board converters can digitally monitor, adjust and have built in “key to line” adhesive pressure control. Adhesive usage data is another key feature. When equipped, all EcoStitch units monitor and measure the amount of hot melt adhesive being pumped through the system. Using either a customer input trigger or an additional photoeye, the melter does not just calculate how much adhesive is used in a day, per hour or per year. It will also display on the screen the average adhesive grams per product.

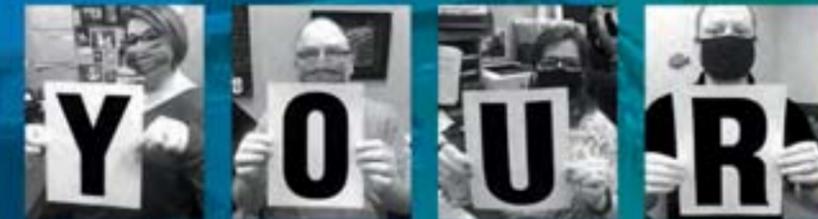


Ethernet IP communication is available on all melters that plug into a plant’s existing PLC and is visible/accessible through the existing HMI. Other features include the rear facing manifold and universal base plate allowing for installation onto almost any existing platform. The melters have eight possible hose/gun connections providing one melter for any possible application requirement. The fully integrated auto feed features a venturi that easily pulls all pellets, chips and slats under 3/8” square. With a universal vacuum wand, the melter can use any adhesive tote and does not require the purchase of a special adhesive container to operate the vacuum system. Also available is a 7KVA transformer base that will fit any EcoStitch series melter and is designed to be mounted on the base of the melter for tight space requirements.

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# Automatic Squaring Bundler System



Signode's SIG-VCS Tandem Automatic Bundler System combines the power of two squaring bundlers connected with dual zone conveyors to meet the extreme demands of modern flexo folder-glueers with inline bundle breakers and operating at speeds up to 36 bundles per minute. The system is fitted with dual coils and auto strap change and can be automatically taught a new bundle recipe in seconds. It also has bundle diversion technology that sends all bundles to the active bundler during a coil change or while the other temporarily inactive bundler "fixes itself" with the auto refeed feature. Once the inactive bundler changes the coil or the successful refeed corrects the rare misfeed; the inactive bundler will come back online automatically and

share the workload with the active bundler.

The icon-drive HMI allows operators to quickly set up a new recipe with a few taps of the screen. Other enhancements include maintenance troubleshooting tools such as a tracing feature, simple strapping system checks, an event list and many more. The new chute technology improves on the previous generation of UHMW chutes by using a segmented chute where the gates are covered by a lifetime warranty. Changing a worn chute after several million cycles was one of customers' biggest headaches. Now they can change a single segmented gate in 20 minutes. This ease of maintenance helps lower replacement parts cost while

reducing service labor costs to a minimum.

"We have been listening to our customers who are eager for a bundling system that maximizes high speed bundling capabilities and minimizes production interruptions," says Mike Stein, Vice President of Marketing & Product Management for Signode's Automation & Packaging Technologies group. "The SIG-VCS Tandem achieves these goals and provides box plant operations with unparalleled performance, simple maintenance and increased uptime for corrugated bundling."



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