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Partnerships In Action:

York Has Designs On Display Breakthroughs

by Jim Curley

Investments in new machinery can kindle enthusiasm at a box plant, but those investments, combined with design talent and a winning management strategy, can transform enthusiasm into excitement. That's an accurate description of what's happening at York Container these days.

Two years ago, as sustainability began to appear on the horizon of global retail consciousness and while his own company was investing in some of the machinery to make sustainability happen, Troy Little was "blue-skying" with paper and glue, experimenting with box and display designs that would both strengthen the corrugated container while reducing the fiber content of the packaging. Laudable goals in line with sustainability initiatives being promulgated by retailers.

Little, York's Director of Design, and other members of its design and management team then worked with German machine manufacturer Bahmueller as a "development partner" in the R&D for the Topmatcher module of Bahmueller's Turbox specialty folder gluer. The Topmatcher unit can feed and join up to three sheets of corrugated board in order to produce shelf-ready packaging. Last week, due in some part to its collaborative success with York, Bahmueller held an open house at its Plüderhausen, Germany plant to show the module in action. Topmatcher also won the "Innovation of the Year" award at FEFCO's recent technical seminar in Berlin.

"When we design a new machine, we like to do it with customers," says Bahmueller's Vice President of Corrugated Machinery Andy Reissmann. "York showed

interest, and Troy and Chuck Wolf, York's President, came to Germany with their designs. They were particularly important in the development of the three-piece feeder."

On The Hunt

During one of their "scavenger hunts," a term Director of Marketing Libby Lehr uses to describe visits to local club stores to see the latest in display and



Standing alongside York Container's new Bahmueller Turbox are, from left, company President Chuck Wolf, Director of Marketing Libby Lehr, Director of Design Troy Little, CEO Alan S. King, and Chief Operating Officer Stephen W. Tansey.

packaging designs, York's marketing and sales team noted that one locally based snack food maker had little presence in these stores. "Why not?" they asked the manufacturer. The answer was a display that was "a nightmare to put together, with labor costs killing the profit margin" and, once assembled, didn't perform well. "It had a lot of failure," Little remembers. When I mentioned that the unfolded blank looked like an

octopus, Lehr quips, “you’d need the arms of an octopus to assemble it.”

Using the Turbox and the Topmatcher module, York Container designed and produced an alternative that provided extra protection for the food item, yet popped open readily for quick set-up at the retail store. “With this style, we saved them 10 percent on fiber use, took 59 percent of the labor out of setting up the display, and increased the compression strength by 57 percent,” says Little. “We basically gave

mitted to buying similar technology, not necessarily the same brand, in order to join the network.” York Container will also pursue licensing arrangements that will allow boxmakers in other regions to offer these designs to their local customers, Wolf adds.

An Idea Comes Alive

Bahmueller had already installed several Turbox specialty folder gluers in Germany, before York Container ordered the first in North America in 2007. Wolf remembers, “We were talking about the dual- and triple-feeding concept at the same time as we were ordering the Turbox. As part two of the project, we told them we’d like to work with them in developing a multi-piece feeder.

Little recalls, “In the middle of 2007, the management group had come to me and said, ‘Troy, if you could glue multiple components together to produce a box, what would you do with it?’ ” he remembers, “I was kind of taken aback initially, but then we began to look at some of our existing business and looked at some designs that were difficult to run, either because of low speed or high waste.”

“The common roadblock was the backfold on the gluer,” he explains. “We decided to concentrate on the backfold section - what it was doing, why it’s there, and how to develop a separate piece of board to improve the products we run. We hand made roughly 10 designs, and I went over to Germany to discuss this with the engineers at Bahmueller.

“On day one, we literally went through these designs one by one, the engineers putting these ideas in their writing tablets. Once they understood what we needed to achieve, they started to come up with the concepts and designs that would make it work,” Little adds. “On day two, they started to come up with rough CAD-generated machine designs to run these items. From that point, the concept started building.

“About nine months later, in July of 2008, we went back to Germany to view the acceptance test and see the machine run. We had three samples that we had sent over and saw them go through the machine,” Little recalls. The Topmatcher was delivered to York in September 2008.

While York management is eager to heap praise on Little and his nine-person design team, Little is happy to return the favor. “The biggest reason for our success is the foresight of management.”

“We had seen a way to improve upon existing two-piece boxes using less fiber,” Wolf adds. Even before the Turbox was installed, York Container began the patent approval process on its newly developed designs. Currently, the company has 8 patents involving 17 dif-



Taming the ‘octopus’ of bad display design, shown by Libby Lehr, is a York Container display that, says Troy Little, protects the contents, saves fiber and sets up quickly.

them a carton with less material, one that is easier to put together and one that will be stronger.”

“It might seem that if we’re taking fiber out of the package, we’re giving our customer a weaker box,” Chief Operating Officer Steve Tansey says. “The reality is that we’re putting the corrugated in a more strategic location.”

“With these designs, we’ve taken custom corrugated to a new level,” Lehr notes.

Buoyed by its success in initial production runs and sales prospecting, York is also working to develop a network of independents interested in producing these items for common customers.

“It’s an exciting opportunity that will open doors that were previously closed to us and will expand the geographic sales range of York Container,” Chuck Wolf notes. “But we also encountered some prospective customers saying, ‘These designs are great, but you’re in York, Pennsylvania. How will you be able to service our plant in southern California or Atlanta?’

“These concerns led us to look to partner with some of the finest independent boxmakers in North America to provide these products to our customers in their regions. Already, three independents have com-

ferent designs in the approval process at the U.S. Patent Office in Washington. "We're confident that all these designs will be approved for patent," Tansey says.

Machine Specifics

"It was important as the Turbox with the Topmatcher module was being assembled that it would be able to run at production speeds," adds CEO Alan S. King. The company expects to run these jobs at speeds of 8,000 to 12,000 pieces an hour, depending on the intricacy of the design.

York's Model BJD 2300 Turbox can handle a wide range of boxes - from 4- and 6-corner to crash-lock and partition boxes in blank sizes from 51 to 82 inches. It features separate servo drives throughout, making the machine completely modular. From the pre-fold to the trombone delivery section, all upper, lower- as well as the center transport carriers are integrated to the Boxflow Control interface. Additionally, optimal glue settings of all extrusion heads are also set by Boxflow Control corresponding to variable styles guidelines. This reduces set-up times considerably, says the manufacturer.

York's Turbox is enhanced by the addition of Bahmuller's PowerPacker module for fully automatic packing. A GE Fanuc robot system with a four-axis operational arm manipulates the batches by +90° or -90° and places them in a bundle forming device. Bundles can be strapped or can be delivered to the palletizing area without straps, depending on box and bundle style. For special jobs the packer can be offset in order to place the batches in the bundling system by hand. The packer layout allows product delivery in-line, discharge to the right or to the left, or against production flow direction.

The new machine addition, King says, will provide an unparalleled opportunity for York Container. "The world is wide open," he says. "These designs we've created are applicable to so many products and situations."

Not only "the world," but present and prospective customers' doors are now "wide open," King adds. "We have so many unique designs that are breakthrough products that there's always something to talk about."

Production Upgrades

On a tour of York Container's more than 300,000-square-foot facility, Wolf tells me that the design breakthroughs of recent months are the result of carefully considered machine acquisitions powered by a team effort from its workers. Fiber-efficient boxes and dis-

plays start with the corrugator and flat board. York's corrugator was upgraded several times throughout the 90s and in this decade. The most recent addition was a BHS singlefacer, which replaced a United unit



The folding section of the Turbox specialty unit

last December. The BHS has the ability to store three separate flutes, allowing for quicker order changes.

The effect of York's investments at the corrugator has been both quantitative and qualitative: output has been increased, while the company has been able to use lighter weight and recycled board combinations more effectively - both sustainability plusses.

York's printing and diecutting department has also seen considerable investments in recent years. The plant has two large seven-color rotary die cutters. The first, a KBA Corrugraph 66-inch by 118-inch high board line unit, was installed in 2004. Its features include vacuum transport, quick anilox changeover, ink management, multi-job storage, automatic setup of the printing parameters, and a networked CPU machine based control system.

The newer seven color high board line rotary die cutter is a 78-inch by 125-inch Gopfert Evolution HBL (high board line), installed in late 2008. Its features include direct-drive technology on every shaft, a grinding system for the anvil for consistent, reproducible quality, print length adjustment, vacuum transport, fully automatic positioning of all shafts for the complete line, and computer controlled running register adjustment. Both printers have automatic pH and viscosity control.

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True Colors

Though her title is VP of Business Development, Coni Wolf, Chuck's sister, has taken particular interest in



Keeping close eyes on color produced on York's seven-color printers are Coni Wolf, VP of Business Development and company Chairman Dennis Willman.

color management. "Our previous equipment didn't hold registration, and moving to these high tech machines was a natural evolution for York," Coni says.

"I sold for 14 years and encountered customers who would ask, 'Can you print that?' Then I'd go back to our plant and our pre-press guy would say, 'We can do it, if we change this or that,' I'd reply, 'We can't change that



York Container's Gopfert Evolution HBL printer

-it's their logo or their brand color. We can't alter that," she remembers.

"That's because the equipment available back then didn't hold registration like it does today. With the technology improving and packaging buyers pushing the industry to better and better printing, things have gotten better. When we purchased the Corrugraph printer, Dennis Willman, our Chairman, and I talked with the engineers to improve the machine so the control of ink pH and viscosity would be better," Coni adds.

Consistency, Repeatability

Newly returned to York from the Flexographic Technical Association Forum in Florida, she notes, "In Orlando, several CPC companies showed slides that illustrate that they weren't getting color consistency in their packages. As an industry, we've got to get better."

"These companies want consistency and repeatability in their print jobs, and that's what we want too." Coni heads a team at York that meets monthly on color management issues. Via a spreadsheet, the group charts the plant's progress in all its print related processes - from prepress to platemaking to printing - broken down by department. "Our ink supplier, Color Resolutions, has been a terrific help on this."

Color consistency will be critical as York begins to partner with other independents using some of the sustainable designs created at York. "It will be vitally important that they manage their process so that printing created by network members is consistent from plant to plant," Coni says.

Focus On Service

Through its 55-year history, York has added to its plant size three times, the last, a 60,000 square foot addition, just completed in 2008. The newest section is devoted to finished goods, with newly-installed metal racks holding completed jobs. "I initially resisted warehousing, but we found that we could run larger orders more cost effectively and still feed our customers smaller quantities from those orders as they were needed. It's enhanced our services," Chuck Wolf says.

"We pride ourselves on the support we give customers," Libby Lehr says. Adds Chuck Wolf, "At York, we look not at tons shipped, but at customers satisfied."

The Digital Difference

In 2004, when York Container began to invest heavily in multi-color flexographic equipment, it also invested in a digital press and created a new company, Concepts, located within a mile of the company's plant. With a VUTEk digital printer and a Kongsburg cutting table, Concepts has given York's designers the opportunity to provide full-scale, full-color mock-ups of prospective packaging.

"We provide York's customers with full-dimension looks at their packaging - not only structure, but graphics as well," says Diane Wolf, Concept's General Manager, "Adding vibrant color to our samples without the expense of printing plates gives York's sales staff an important edge in presentations to customers. In addition, our services allow customers to cost-effectively test market designs and ad copy aimed at specific markets." In addition, York Container provides some fulfillment services at Concept's 10,000 square-foot plant.

Concepts has also achieved success in printing on non-corrugated substrates such as Sintra, foam board, banner vinyl and large scale window mesh, such as several that appear at the stadium of the York Revolution, the city's minor league baseball team. "Diane is great at finding opportunities for Concepts that are outside the box," Chuck Wolf says.



Diane Wolf heads Concepts team.