

Electromechanical linear actuators replaced hydraulic systems to guide Alcan's Kampf and Wickeltechnik slitter unwind stands. The rugged UHT-6 model has a 40,000-lb. thrust rating.



# Electronics in, hydraulics out

**Alcan Packaging's Pharma Center smoothes web flow with new linear actuators, ultrasonic edge detectors and digital sensors.**

It doesn't take long to get Chris Berwick excited about his company's commitment to continuous improvement and its relentless advancement of technology. As the engineering manager of the Alcan

Alcan represents one of the world's largest packaging groups with global leadership positions in pharmaceutical, beauty, and food packaging. The packaging sector employs 34,000 people in 180 manufacturing facilities, located in 28 countries, and represents approximately 30 percent of the corporation's total revenues.

## Under one roof

The Shelbyville location incorporates both Food and Pharma operations with 270,000 sq ft under one roof on a 38-acre site. The Alcan Packaging Pharma Center represents



WideArray™ edge detectors replaced mechanical edge-seeking devices on Alcan's Polytype Triplex adhesive laminators and Bobst Rotomec gravure presses.

a dedicated 70,000-sq-ft specialized operation, which is 100-percent focused on healthcare packaging. According to Berwick, "The Pharma Center is a clean manufacturing

## COVER STORY

Edited by Editor in Chief  
Mark Spaulding

Packaging Pharma Center in Shelbyville, KY, since 1996, Berwick has been pivotal in securing much of the ongoing investment to build Alcan's proprietary multi-layer laminates for the pharmaceutical industry.

facility, which follows the cGMP guidelines applicable to the converting industry and has been certified for ISO 9001-2000, ISO 14001 and OHSAS 18001.”

The Alcan Packaging Pharma Center produces a wide variety of specialty pharmaceutical packaging products, including its ultra high-barrier, cold-formable Formpack® material, printed and unprinted push-through and child-resistant blister lidding options with in-line, fully registered two-side printing capabilities, a variety of retortable flexible packaging structures, and printed pouch stock.

New product introductions will positively shape Alcan’s leadership position this year. The addition of two thermoformable base-web films, Polybar®-ACLAR® and Polybar®-COC, creates a unique one-stop-shop opportunity for its customers to source all blister-pack materials from one competent supplier. A full range of new product security solutions to combat drug counterfeiting and help secure supply chains will also become available under the Smart PAK™ and N’CRYPT® headings from the Shelbyville plant.

### High standards met

To protect Alcan’s global position and strengthen its partnerships with leading companies in the pharmaceutical industries, standards are set very high. “We invest millions annually to ensure every packaging system produces superior products in the highest quality,” says Berwick. “We’ve retrofitted virtually every piece of equipment



Alcan Packaging Pharma Center managers include (left to right) engineering manager Chris Berwick, finishing department supervisor Melissa Coons, and senior operator-lamination Larry Nutt.

with proprietary or state-of-the-art innovations to gain a competitive advantage and superior performance wherever possible.”

The facility currently operates Bobst Rotomec (Charlotte, NC) gravure presses, Polytype (Hackensack, NJ) Triplex adhesive coater/laminators, slitter/rewinders manufactured by Kampf Machinery Corp. (Windsor, CT) and WT Wickeltechnik GmbH (Wiehl-Marienhagen, Germany) along with other converting and support equipment.

### Specifics:

**ALCAN PACKAGING PHARMA CENTER:**  
Shelbyville, KY

**OPERATIONS:** Coating/laminating,  
gravure printing, slitting/rewinding  
**PLANT SIZE:** 70,000 sq ft

**MAJOR EQUIPMENT:**  
Bobst Rotomec gravure presses  
Polytype Triplex adhesive laminators  
Kampf, Wickeltechnik slitter/rewinders

The retrofit work started with the basics: guiding the web more precisely through the gravure presses and the three- or four-layer lamination process. “One of our first steps was to retrofit the web guides to remove hydraulics from the web path,” Berwick explains. “They were replaced with AccuWeb (Madison, WI) DC servomotor linear actuators because AccuWeb was the only company that could provide electromechanical systems to cover any application, with thrust ratings as high as 60,000 pounds.” The actuators’ ball screw/lead screw assembly provides instant web corrections, improving

guide accuracy, the supplier says.

“Our first concern was to remove the chance of a hydraulic leak near the web path, but we gained many other benefits such as faster response, greater reliability, and ease of installation,” says Patrick Mays, Alcan maintenance supervisor. “These systems continue to run trouble-free with virtually zero maintenance.”

### Upgraded edge detection

Next, Alcan began replacing mechanical auto-edge seeking devices with AccuWeb’s Wide-Array™ ultrasonic edge detectors in its chaser-slave systems. (See sidebar.) The former mechanical edge-seeking units had too many parts that could fail, which created downtime and higher waste.

The WideArray provides 18+ in. of detection area, so the web width could be changed on the fly without moving the detectors. The



*AccuBeam® II digital line guides on Alcan's Kampf slitler/rewinders (left) provide optimum contrast on reflective foil laminates. AccuWeb HT-4 explosion-proof electromechanical linear actuators (below) were retrofitted in all of Alcan Packaging Pharma's Class I Div. I environments.*



WideArrays never need calibration due to compensation technology that continuously recalibrates matched to the current environment, the supplier says. "The system has become invisible to our operators, which allows them to concentrate on other ways to maximize productivity", adds Alcan senior operator Larry Nutt.

One of the Bobst Rotomec gravure presses is still in line for retrofitting this year. It provided a good barometer on the value of the investments, when comparing uptime and spoilage rates. "Given our ability to drive material improvements, it doesn't take long to pay back the investment," Berwick says.

### Slitter improvements

In the finishing department, the hydraulics on Alcan's Kampf slitler/rewinders were also retrofitted with AccuWeb's UHT-6 actuators. CCD line guides were re-placed

**"World-class partnerships: A strategic approach to purchasing built on a foundation of communication, trust and understanding between customers and suppliers."**

**Travis Engen  
Alcan President/CEO**

with AccuBeam® II Digital Color Line Guide sensors. AccuWeb's AccuBeam II uses patented optoelectronics that provide four different light-source options for optimal color contrast and three selectable projection ports for the

best light incidence angle for any given web characteristic.

"The AccuBeams were the only line guides that could see pastels on our laminated foils," explains Melissa Coons, finishing department supervisor. "The AccuWeb line guide combined with the micro-response we get from their actuators allows us to hold much tighter tolerances."

The Alcan Pharma Center is continuing its strong investment in technology. This year, the converter will add additional space to house a new ink room and parts-washing department, and a further capacity expansion is on the drawing board for 2006.

"The march toward perfection is a relentless one, but Alcan has both the will and the wherewithal to get there," says Berwick. On his desk are the capital proposals he's drafting for the next two years. It seems the Pharma Center is taking nothing for granted. ▶ 26



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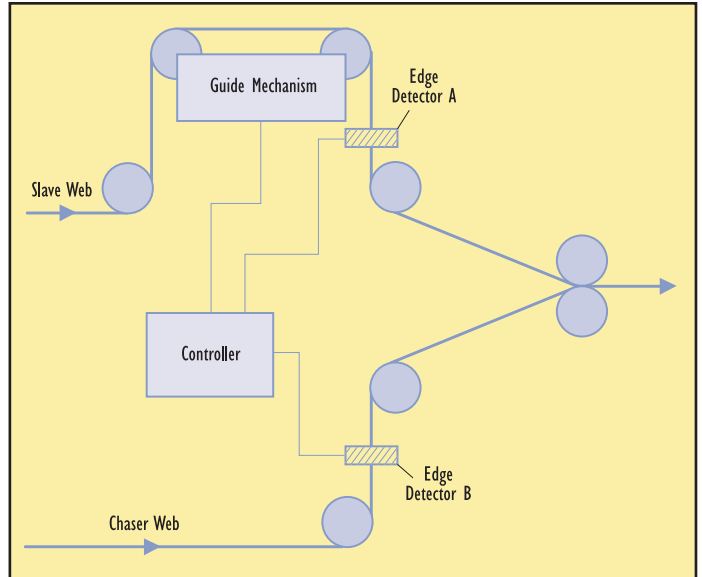
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## Chaser/Slave upgrade closeup

The Chaser/Slave systems used in Alcan Packaging Pharma Center's laminating operations employ a Micro 4000® NET Controller and WideArray™ ultrasonic edge detectors from AccuWeb (Madison, WI).

The "slave" web is guided to match the position of the "chaser" web so that they have an identical relative position. One edge detector is mounted to detect the chaser web, and a second edge detector is mounted on the slave web guide. The guide point of the slave edge detector is determined by the output of the chaser edge detector. As the chaser web moves, the guide mechanism repositions the slave web to keep it in the same position as the chaser web. An offset signal may be used to fine-tune the relative position of the slave to the chaser. Using the WideArray edge detectors, the Chaser/Slave function can be performed without the need for mechanical edge-seeking devices.



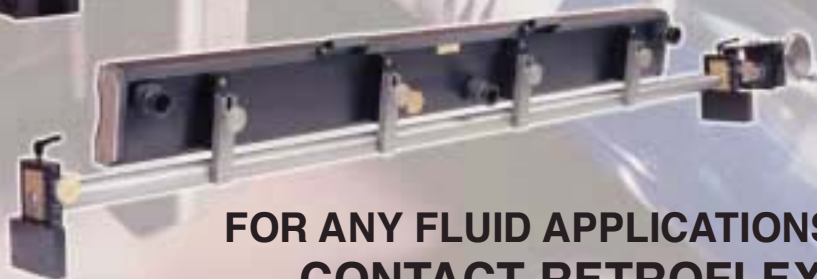
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