

# Automate NOW

SUPPLEMENT TO CANADIAN PACKAGING AND FOOD IN CANADA

FEBRUARY 2007

## HEALTHY LIVING

BY ANDREW JOSEPH, FEATURES EDITOR • PHOTOS BY GLYN DAVIES

Pharmaceutical co-packer boosts packaging line output and quality with high-speed labeling and high-precision vision technologies

As global pharmaceutical giants around the world continue trying to outwit and outdo one another in a relentless race to discover the next revolutionary, lucrative “wonder drug,” there has never been a more opportune time for third-party contract manufacturers to cash in on the multibillion-dollar R&D frenzy by taking care of their more mundane, everyday production and distribution tasks.

With its international headquarters in Newmarket, Ont.—a 40-minute ride north of Toronto—**Trillium Health Care Products Incorporated** offers a compelling real-life example of this fast-unfolding trend.

Serving high-profile clients across Canada, the U.S. and the European Union, the company produces and co-packs some of the world better-known brands of pharmaceutical, OTC (over-the-counter), HAB (health-and-beauty) and nutraceutical products on behalf of blue-chip clients who are just too overextended, or otherwise preoccupied with their product development, to keep doing it themselves.

“Today, Trillium manufactures products for four of the top 10 multinational pharmaceutical companies, as well as a number of small to large generic manufactur-

ers,” notes Lee Brown, liquid dose packaging reliability leader at the company’s sprawling 205,000-square-foot, 325-employee pharmaceutical production and co-packing facility located on a 20-acre site on the outskirts of Brockville, Ont.

“Purchased by Trillium in 1998, the Brockville site has had a long history of being a world-class drug manufacturing site, as it has been sourcing drugs to North American markets for the past 50 years, and recently expanded into the European market,” Brown told *Automate Now* in a recent interview.

In addition to the Brockville facility, Trillium also operates a smaller, 140,000-square-foot plant in Perth, Ont., specializing in beauty and personal-care products, as well as the massive, 1.1-million-square-foot production complex in St. Bernard, Ohio—employing about 800 people in total.

“Our St. Bernard plant, located just outside of Cincinnati, is the largest bar-soap contract manufacturing facility in the world,” says Brown, adding that the factory runs on 24/7 schedule through most of the year.

What sets Trillium apart for its many competitors, according to Brown, is its full turnkey capabilities—a full-service laboratory and a dedicated logistics team—and a three-pillared corporate philosophy stressing the virtues of technological prowess, versatile production flexibility, and top-notch product quality.



A Trillium employee at the Brockville, Ont. facility watches the custom-built SM 9000 labeling machine, constructed by SPS/PHIN, quickly and accurately apply labels to pharmaceutical packages.

“Trillium can also offer a wide range of manufacturing capabilities, allowing one-stop shopping for many of our customers,” states Brown. “We also have a strong technical services group that is set up to flawlessly handle product transfers, as well as provide technical support for the ongoing business.”

The Brockville facility houses a total of 17 packaging lines, according to Brown, with its designated “cough syrup” line providing a textbook case of using up-to-date industrial automation technologies to achieve optimal manufacturing productivity.

“We call it our cough syrup line,” Brown notes, “but it’s actually used to produce a number of different liquid products, the bulk of which happens to be cough syrup. “This line runs bottle sizes ranging from from three-ounce mouthwash bottles up to a 500-ml oral rinse bottle,” Brown states.

“We can run round, oval and square bottles on this line,” he adds, pointing out that the line churned out a mind-stretching total of 8,404,942 bottles of product over the course of 2006.

After the bulk empty containers are unscrambled and blown clean with ionized air, they are conveyed to the 15-head *Hytamatic* level sensing filler from **Horix Manufacturing Company** for filling, and then capped by the model *U30 695 inline capper* from **Resina West, Inc.**

After that, the bottles are passed for labeling onto

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A Videojet Dataflow Plus thermal transfer printer adds coded security data to each label prior to its application to a product.

## PAR FOR THE COURSE

Golf equipment supplier hits a hole-in-one with automated conveyor system on a packaging line

Precision is a priceless attribute in just about any competitive sport out there, but it is absolutely paramount in golf, where the art of placing a tiny ball into a tiny hole in the ground hundreds of yards away with the fewest swings of the club is studiously practiced daily around the world by the ever-growing ranks of amateur golfing enthusiasts and high-profile professionals.

According to the game’s fervent fans, one of the sport’s many appeals is the opportunity to make the impossible happen. The fascination of being able to determine the swing and the direction, of making the ball defy the laws of gravity for just a split second, are pure magic for avid and casual golfers alike.

None of that magic could unfold, however, if not for the golf ball, which is something of a high-tech wonder in its own right. With a circumference of a mere 42.67 millimeters and maximum weight of 45.93 grams, it has to be nothing less than that in order to be able to travel vast distances and drop into a tiny hole on the putting green.

To ensure that such feats can be performed, the surface of the golf ball—today made from such hi-tech alloys as carbon, aluminum, titanium and the like—is covered with several hundred tiny dents or dimples.

Combined with rotation caused by hitting the ball with a club, this design allows the tiny ball to travel up to three times farther than a same-sized ball without such dimples.

Venerable U.S.-based sports equipment manufacturer **Wilson Sporting Goods** produces millions of these golf balls per year—along with a broad range of golf clubs and golfing accessories—at its manufacturing plant in Humboldt, Tenn., using a broad range of automated machinery.



Plastic sleeves are automatically inserted into their nests during a packaging run at the Wilson plant.

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EDITOR	George Guidoni	(416) 764-1505
FEATURES EDITOR	Andrew Joseph	(416) 764-1529
PUBLISHER	Stephen Dean	(416) 764-1497
ACCOUNT MANAGER	Anne Marie Brennan	(416) 764-1507
SALES COORDINATOR	Norine Mark	(416) 764-1455

AutomateNow is a regular supplement to *Canadian Packaging*, a monthly publication of Rogers Publishing Limited.



Automate**NOW**

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the recently-installed, custom-built **SM 9000** rotary labeling machine manufactured by **SPS/PHIN Limited**, a Toronto-based manufacturer of high-performance labeling machinery.

“Our preference was to find a local [Canadian] manufacturer,” Brown relates, “and we wanted someone who could put the whole package together.

“Of the 15 requests for quotes we sent out, we received responses from 12 suppliers, and out of those we chose to go with SPS/PHIN.”

While the price quoted by SPS/PHIN was not the lowest, Brown notes, it was still price-competitive and, most importantly, the machine proposed by SPS/PHIN provided the most potential for future expandability to accommodate growing production requirements.

“We wanted the machine we were going to buy to be flexible enough to become our standard technology as we look to upgrade labelers on our other lines in the future,” Brown states, adding that the **SM 9000** has performed as well as expected since it was installed last fall.

“When Trillium came to us and explained all of their

requirements, we took one of our existing **SM 900** labelers and beefed it up considerably,” recall SPS/PHIN general manager Hugh McCrie, adding that the end result was a stronger, more robust machine,



A Cognex vision system inspects product labels to ensure presence, readability and accuracy.

with its all stainless-steel construction making it perfect for the frequent washdown procedures in pharmaceutical and food production environments.

“There’s no need for equipment to become completely obsolete after three years,” McCrie states.

“Nowadays, good manufacturers should be able to create equipment to last a lifetime, that when a client is ready to expand its operation, its equipment should be able to handle all that too.

“It’s what we call proactive manufacturing.”

Brown agrees: “Besides meeting our current needs, we feel this labeler gives us the technology that we can utilize on our other lines in the future, with few changes to the base model—meaning it will be easier to train operators and reduce the spare parts needed in our storeroom.”

The SPS/PHIN labeler’s redundant labeling capabilities have virtually eliminated the need to stop the line for label changes, according to Brown, with its swing-out heads making it far easier and faster to perform label changeovers than on the previous machine.

Brown was sufficiently impressed with the SPS/PHIN’s technical expertise that he even asked McCrie to recommend the best-suited inspection system for verifying the lot and expiry codes applied onto labeled containers by the model **DataFlex Plus** thermal transfer printer from **Videojet Technologies Inc.**

After closely scrutinizing all aspects of the line’s labeling and coding operations, McCrie recommended the **Proof Read** vision system from **Cognex Corporation** as best-suited for handling Trillium’s stringent online inspection requirements for code presence, readability and accuracy.

“We chose Cognex as the best fit for them,” says

McCrie, “and I’m sure Trillium would agree that Cognex has provided them with terrific technical support, including site visits, new software releases, and operator training—at no extra cost to Trillium.”

Brown concurs: “Now we have a machine that resembles a glass cockpit, with an HMI (human-machine interface) for the machine operation with multiple screens.

“The Cognex vision system, which uses a touch-screen for quick set-up, is definitely more sophisticated than the system used on the labeler we had on this line previously.”

Brown adds that he is very grateful for all the extra technical advice provided by SPS/PHIN in respect to enhanced line integration.

“We’ve been very happy with SPS/PHIN; it is a very good company to work with,” sums up Brown. “Their staff is very knowledgeable, and they have told us they are available at any time—even providing us with cell-phone numbers to contact them, if need be, during off-shift hours.” □

For more information on:

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A Trillium employee uses an Orion stretchwrapper to secure cartons of pharmaceuticals to the pallet.