



Pushing the envelope

IN THE FIRST OF A NEW SERIES, Danielle Jerschefske considers how complex end user applications are creating new, value-added opportunities for label converters

The label industry is superb at producing pressure-sensitive products – all sizes, colors, finishes, multi-page, repositionable, and with special features like holograms and scratch & win. To maximize the use of these value-added items, label consumers in the print and packaging industries need to know about the new possibilities for using labels to enhance their products.

The competitive climate is right. With continuing consolidation, there are pressures to be more efficient and offer value-added solutions. Label customers may be increasingly receptive to creative ideas from their label suppliers, provided there are cost-effective ways of applying labels that maintain or enhance their production environments.

A good example comes from the Chicago-area Segerdahl Group, which specializes in the production of sophisticated marketing materials in one pass on their high speed direct mail production line, including brochures, catalogues, newspaper and magazine inserts and mailers for a variety of national clients. As one of the top five direct mail printers in North America, its most sophisticated products include personalized mailers for the retail market.

The company recently completed a project to install a PowerForward PowerStick label-on-label specialty applicator to apply self-adhesive items at a full speed of 80,000 per hour, anywhere on its range of printed products.

The investment project commenced in 2007 when Segerdahl's major healthcare client began upgrading its monthly and quarterly personalized mailers. First was the order of a multicolored, bi-fold brochure with a personalized card on a center insert inside. To make the thick paper card more realistic, the client asked that the card be laminated, and so Segerdahl added laminating capability to its plant.

Later, to make the card look even more valuable, the customer requested a label on top of the card like the activation stickers used on financial cards. Segerdahl was not equipped to fulfill this second need. Therefore, John Romita, Segerdahl's VP manufacturing started looking for an applicator that could be used in-line to apply this label for his health care client. Romita says, 'It had to operate in-line because we do everything in-line to maximize productivity.'

At Segerdahl, in-line finishing starts with a roll of paper and ends with a complete product ready for mailing. In 2007, the plant included many in-line functions: printing, gluing, plow-folding, die cutting, coding, imaging or personalization and laminating. However, labels could only be added using an expensive secondary process because the available label applicators were not suited to the demands of Segerdahl's production environment.

IN-LINE FINISHING

When Romita placed his order in early 2008, Segerdahl became the first PowerForward client in the in-line finishing market space. Romita likes the 'simple, straight-forward design' of the PowerStick applicator and worked with the team at PowerForward to adapt the unit to Segerdahl's production environment.

According to Kevin Quinn, PowerForward president, the PowerStick's design is simple. Quinn says, 'The label peels smoothly off the release liner, travels across a slide plate and onto the web into the designated position while automatically synchronizing with the speed of the web. The complexity is in the details of the software control.'

At the time of Segerdahl's investment in the PowerStick



label applicator, the product was new; it had been designed for high speed use on web presses and was being used in a newspaper application. Still Segerdahl had more pieces per cylinder impressions – repeats of 8 -10 inches rather than 23 inches for newspapers – and required more precise placement. In addition, Segerdahl had two other key requirements: the unit needed to have a minimal footprint, and the label supply needed to be a steady, unbroken stream of material.

To reduce the size of the applicator, PowerForward created a new core model of its PowerStick machine by removing the label supply and rewind rolls. The resulting smaller machine is 38 in L x 14 in W x 28 in H and weighs 50 lbs. No changes were needed to the applicator functions themselves. Release liner waste was easily handled by the plant's vacuum system, but the external label supply resulted in additional work for both Segerdahl and PowerForward.

For the label supply, Segerdahl tried and quickly rejected fan-folded packs of labels. Instead they introduced rolls and a splicer which improved reliability, but placement wasn't consistently accurate. Suspecting that varying tension of the labels from the splicer might be the issue, PowerForward worked with Bruce Rush, Segerdahl's director of engineering to conduct a test, using a

EXPANDED MARKET FOR LABELS

Segerdahl is meeting its customer's requirements and buying more labels, because they found an applicator suited to its inline finishing operation. The ability to apply labels on a high speed press can open opportunities for others in the print and packaging industries, and increase label sales.

second PowerStick unit to control the tension of the label supply. With that, the applicator unit's placement accuracy became consistent, and PowerForward's technical team designed a loose loop feature (a dancer arm and sensors to control the tension) to add to their applicator unit.

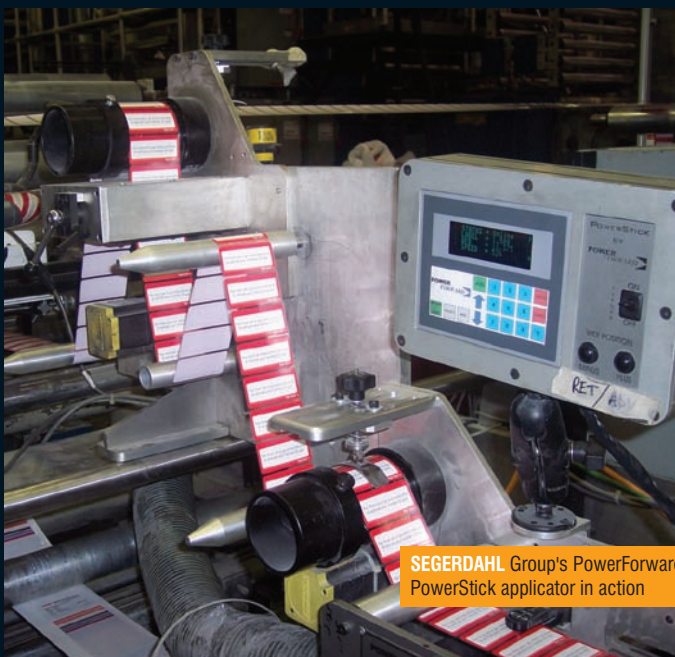
The PowerStick applicator has now been working seamlessly in Segerdahl's in-line finishing operation for over 18 months. Romita says, 'we are really happy with the support we received to adapt the PowerStick to our production environment. The people at PowerForward were dedicated to finding a solution; they did the testing, developed the solution and retrofitted the machine. Now the machine is fantastic.' Romita is also impressed by PowerForward's commitment to continuously improving their product and says that he's keeping track of their latest developments.

DEVELOPING THE TECHNOLOGY

Kevin Quinn of PowerForward says that the company developed its initial product concept in 2005 when a packaging company asked whether they could apply a resealable closure for baby wipes over a die-cut hole on a moving web.

Intrigued by how to apply these closures, Quinn first developed the basic technique of using a non-stick slide plate to transfer labels from a release liner to a web, and then built the PowerStick around that. At the heart of all of its machines are servo motors and propriety controllers. Quinn says, 'we've learned that simple mechanical design plus sophisticated software control are a winning combination.'

Their original PowerStick applicator (now called the 'on-board model')



SEGERDAHL Group's PowerForward PowerStick applicator in action



A SEGERDAHL operator with the PowerStick applicator

includes a 20 inch roll supply and liner waste rewind. In the past three years PowerForward has added the core model based on how they adapted the PowerStick for Segerdahl. And they have also developed a 'non-stop model' in response to customer requests for a self-contained PowerStick applicator that runs continuously at 1200 labels per minute or more without stopping for roll changes.

MAXIMIZING RETURNS

Flexibility and reliability are helping Segerdahl to maximize its return on investment in the PowerStick applicator. Romita says, 'the PowerStick can apply just about everything – there's a broad window in terms of product types. It's very, very flexible.'

Earlier this year, Segerdahl used the applicator to add packets of seeds (1.5 x 1.5 inch) to a spring mailer for an apparel retailer. They have also tested other types of products such as fridge magnets, various types of labels and packets, and a window patch on a mailer. The small unit is also easy for Segerdahl to move. Romita explains, 'we can move it and install it on another press within our usual set-up time. This allows us to maximize use of the machine and increases our ROI.'