Technical Director's Report

Werner Rebsamen

Print 13 – An Introduction of a New, Revolutionary Adhesive Binder – The Smartliner 240 by Palamides

Ever since the introduction of Perfect Binding in 1887, binders and their adhesive suppliers have searched for ultimate solutions to enhance adhesion and cohesion. Earlier binding techniques used animal and vegetable glues. In 1911, polyvinyl acetate (PVA) was introduced by a German adhesive supplier. In the 1960s, hotmelt adhesives started to dominate the tasks of high-speed perfect bindings. At the turn of the century, in 2000, the use of PUR became more common, solving many adhesive binding problems.

Remember our exciting Park City, Utah meeting? During that meeting, Franz Landen introduced an all-new lay-flat adhesive binding technology. Prior to that meeting, I had reached into my own pocket and traveled to Germany to familiarize myself with this new technology. You may also look up the Fall 2009 *ShelfLife* and read my six-page article on "Nature's Secret." Scientists finally found the secrets of how mussels stick to rocks at the seashore. That new adhesion technology is already being used in the wood panel industry.

Franz Landen, a German pioneer, inventor, and professor, started to experiment with this all-new technology, reversing the surfaces designated for adhesive binding and with it, achieving ultimate adhesion. In Park City, he promised to have a binder available within a few months. Unfortunately, those early table models were not suitable for efficient, daily production tasks. Other binding machine designs for this technology never left the machine shops, that is until Stefano Palamides, the former MBO folding machine CEO, connected with Franz Landen. As a graphic arts machinery supplier, Palamides is well known and has a proven track record as a worldwide leader of paper delivery systems. There are already 1,800 in daily operation. Palamides engineers designed and built this all-new adhesive binder, using patented technologies that will, most likely, change our industry. (Over the years, many out in the trenches have asked me, what will come after PUR – well, here it is!)

As reported in a past issue of the *Endpaper,* during drupa 2012, Palamides and Landen introduced this all-new lay-flat adhesive binding concept. That binder was only a quickly built prototype. Since then, and after much experimentation and many redesigns, that "Dreamliner" of a lay-flat binding machine finally became a reality, enjoying a successful introduction during Print 13. No other adhesive binding technology is capable of achieving what this all-new Palamides Smartliner240 can do: binding slippery, coated paper stocks while the sheets lie flat at 180 degrees, and still achieve a superior adhesion. With this new adhesive binding technology, Palamides is now treading onto an all-new path. As stated, the so-called smart-flat binding technology was invented and developed by Ribler GmbH with the adhesive binding machine being engineered and built by Palamides GmbH.

The machine introduced at Print 13 is still a single clamp binder and therefore limits productivity to approximately 240 books per hour. I'm sure that, based on the enthusiastic responses, especially from photo book industry and binders, multiple clamp binders must already be on the drawing board and most likely will be introduced in the not too distant future. As bookbinders, we are fully aware that when gluing a book block onto a softcover, those sometime stiff covers restrict lay-flat characteristics. That is why, over 20 years ago, I introduced Repkover. (Patent expired.) Combining that binding technique with that of the smart-flat binding would be an ultimate dream come true. For hardcover bindings, combined endsheets can be used. The book block then, being glued only to the cambric strip on the spine, will result in ultimate lay-flat properties.

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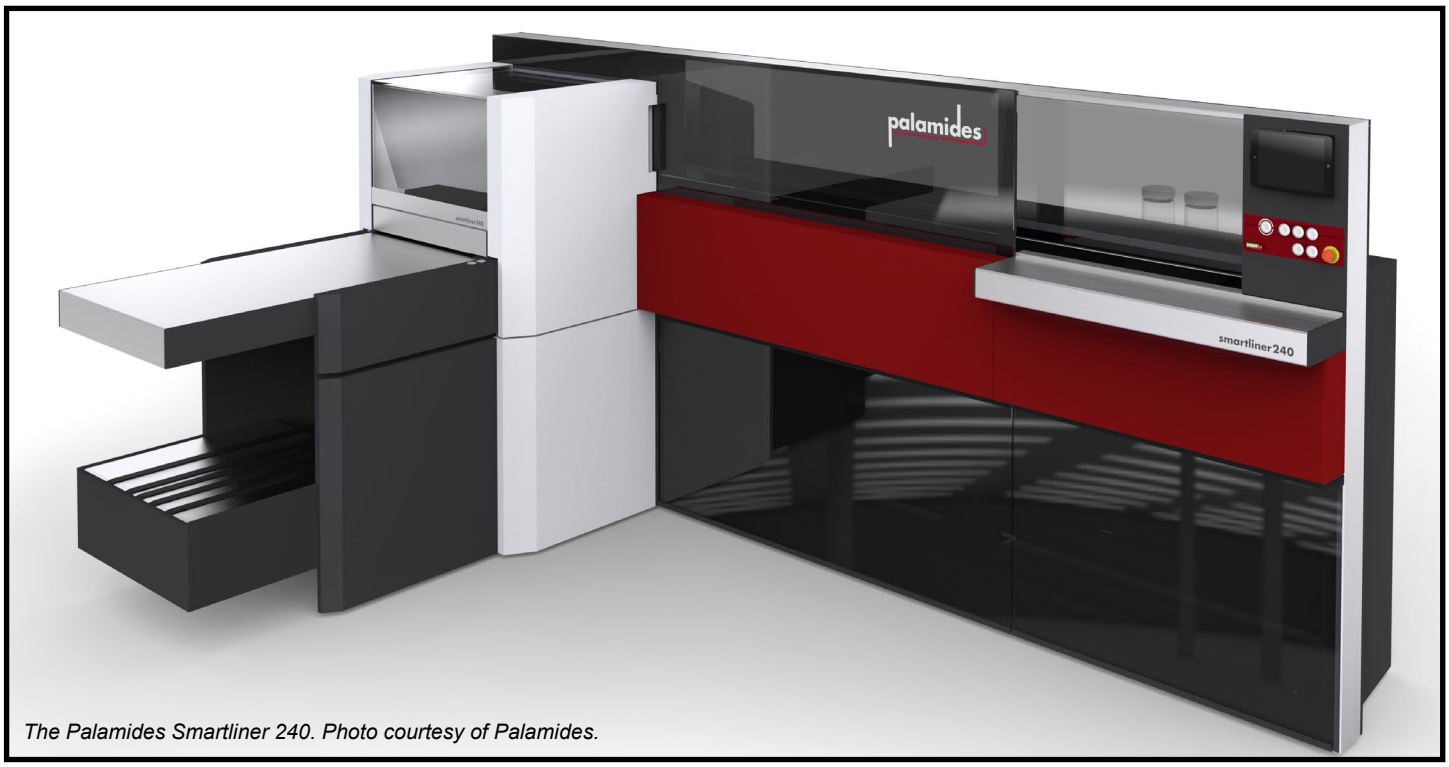

The Palamides Smartliner 240. Photo courtesy of Palamides.

As written and published earlier, "Nature's Secret" also offers "green" binding technology. Unlike Hotmelt or PUR, no heating of the adhesive is necessary and there are no toxic fumes to exhaust. The Smartliner240 uses a patented, Ribler developed cold emulsion adhesive and "Nature's Secret," which is a most unique, patented surface reversal application. This new technology has already received prestigious environmental awards.

Smartliner 240 Highlights and Advantages:

- No heating-up time required, always ready on demand
- No cleaning up of glue pots – using cold emulsion extrusion technology
- Patented, micro fiber spine preparation, no notches showing
- Create Panorama photo books with half the paper
- Eliminate the mounting of printed sheets on top of each other (Much lower cost!)
- Exceptionally strong adhesion with new surface treatment technology
- Perfect lay-flat features like no other method of binding

Here are some technical specifications:

Book sizes:	Max.	430 x 350 mm	17 x 13 ¾ inches
	Min.	140 x 90 mm	5 ½ x 3 ½ inches

Book block thickness: 3 to 40 mm 1/8 to 1 9/16 inches (Although the limit of a 40 mm thick book block still seems to be insufficient, it is, in my opinion, more than enough for true lay-flat bindings. Thicker, heavier book blocks need some support on the spine)

With this new technology, you are able to bind glossy or coated paper stocks, digital-print papers, laminated and coated stocks in various weights.

For further information, contact: Ivan Verheye, Palamides US Sales (100 Norb Ave – Ste 3, Dieterich, IL 62424). He can also be reached by phone at 217-925-5900 (office) 630-532-4436 (mobile) or via email at iverheye@palamides.de.

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