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For Beverage Carriers:

Carton Innovation Provides Efficiency, Cost Benefits

by Jim Curley

Product Innovation + Reduced Packaging Cost = Satisfied Customer. This formula, likely a key to success for 21st century converters, is being achieved by Malmö, Sweden based A+R Carton. In collaboration with machinery manufacturer Roberts Polypro, Charlotte, North Carolina, A+R Carton has developed a carrier for six-packs of beverage bottles that provides increased strength of the unit at the handle, a greater use of recycled board, and increased utilization of high speed converting and filling, all while reducing production costs for the carrier of between 10-18 percent.

"Traditionally everything in the six-pack carrier market has been made from a single piece of board, but A+R Carton realized the bottle divider could be made from recycled paperboard, thus saving money," says Hilger Scheelcke, Managing Director of A+R Carton North America. In addition, an extra ply of recycled board has been added to the handle, reinforcing that part of the carrier.

"It was not an easy job to reduce costs, since approximately 50 percent of costs are mill-related, and we don't have our own mill," Scheelcke adds.

The two-piece construction of A + R Carton's patented beverage carrier features recycled pressed board at the dividers (lighter color inside basket) and in the handle.

In conjunction with A+R Carton, Roberts Polypro developed a Beverage Carrier Assembly Machine (BCAM) capable of forming open basket beverage carriers from the joining of kraft board and pressed board made of recovered fiber at speeds greater than on traditional one-piece assemble machines.

It's Here Already

Since more than 95 percent of A+R's Open Basket Carriers (OBCs) are going via major European brewers to distributors in North America, the two-piece carrier filled with Europe's premium beer is currently on our store shelves.

For the beer buyer, the change in the OBC's construction is evident only when the bottles are taken out of the carrier, and the empty basket is examined. Printing is applied only on the SUS (solid unbleached sulphate) board, the grade traditionally used for OBCs.

The combined board carrier, says Scheelcke, has several advantages that provide supply chain management efficiencies with no loss to the beverage brand's premium "look." These include:

- excellent graphics;
- handling security for the consumer;
- a lower-cost product, thanks to reduced raw material costs and manufacturing efficiencies at the converter's facility; and
- efficiency of handling through the packing process at the brewery.

A+R Carton North America, based in Duluth, Georgia, is currently marketing this innovation to American converters for its parent company, and Scheelcke is spearheading those efforts. The product was introduced in the States at two shows in 2002, and the reaction was very positive, says Roberts Polypro representatives.

A+R has also generated interest from several large integrated converters and at least one independent cartonmaker in the U.S., Scheelcke reports. To achieve the cost savings and operational efficiencies promised by this innova-

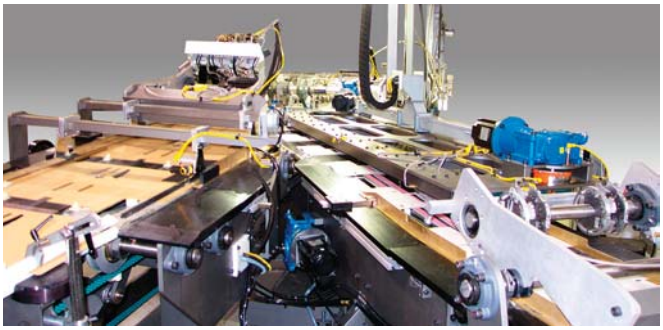
tion, "U.S. businesses must be willing to change specifications," Scheelcke explains. "Eighty to ninety percent of wet-strength specifications are not necessary for this product. The one-piece OBC is overpackaging."

Scheelcke contends that the new two-piece OBC is likely to be even stronger in the U.S. than in Europe because of the higher quality of recycled paperboard produced in North American mills.

An Effective Partnership

In January of 1996, Europa Carton, now A+R Carton, approached Roberts Polypro about building a liner spotter for a beverage carrier. Initially, the design focus was on one style, but, as the project developed, A+R Carton wanted the flexibility to run different style packages on the same machine. This requirement, coupled with an unproven package design, complicated the project.

After intensive research and discussions with several machine manufacturers, A+R Carton became satisfied that Roberts Polypro could be a suitable partner in this project and a contract was signed in 1997.



Roberts Polypro, A+R found, had achieved considerable success in making machines to manufacture two-piece packaging for North American converters.

Continuous engineering improvements in both machine and package design eventually produced a viable combination. Installation of the Roberts Polypro folder gluer at A+R's plant in Sneek, the Netherlands took place in January 2000 and production began the next month. (A+R also produces the OBC at its plant in Bremen, Germany, though its Sneek plant is almost completely dedicated to the production of OBCs.)

"Product failure was a major concern, so trials were held for one year," Scheelcke said. Since its debut in the marketplace, A+R's new OBC has achieved remarkable success: Europe's major premium brewers have shipped more than 250 million carriers with no complaints registered about the two-piece construction.

The success of the new carton led A+R to order a second Roberts Polypro folder gluer at the Sneek plant. That machine, which was installed in only four weeks in the autumn of 2002, included refinements in construction based on A+R's experience running the first machine.

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Consistent die cutting and gluing is essential to successful converting of the two-piece OBC. According to Roberts Polypro, "When die cutting deteriorates, finishing suffers in several areas of the machine, including feeding, nick breaking and tongue folding."

The innovation does not require more glue, but the precise application of glue, says Scheelcke. The package design and folding sequence requires glue to be applied at four different locations of the machine. Roberts and A+R Carton contracted HHS Gluing Systems to provide a system consisting of 42 glue heads and four glue application controllers. The HHS glue system has worked well from the beginning, say Roberts and A+R Carton.

Achievement And Acceptance

"The success of this project is a tribute to the partnership forged between A+R Carton and Roberts Polypro," says Allan Sutherland, President of Roberts Polypro. "This project could have ended in failure were it not for the commitment by both companies to work together to ensure success."

"Both partners learned to apply different specifications to achieve a quality level desired by European breweries," Scheelcke adds. "More than 250 million two-piece OBCs produced in Europe are accepted by the consumer of the most demanding beer market of the world, the USA."

As Scheelcke brings his innovation to U.S. converters, he is confident that a business "truism" will be prophetic: "The unthinkable of yesterday is the innovation of today and the standard of tomorrow."

About A+R Carton

A+R Carton was formed in 2000 when it acquired the folding carton business of AB Akerlund & Rausing and shares in Folding Carton Partners SA. Catering primarily to the food, beverage and tobacco sectors of the marketplace, A+R had sales of €357 million in 2002. The company is the third largest non-vertical integrated supplier of multipack packaging in Europe.

A+R Carton has 15 plants in nine European countries, the Netherlands, Germany, the U.K., France, Norway, Sweden, Finland, Russia, and Estonia. The company has sales offices in nine cities in Europe as well as in Duluth, Georgia.