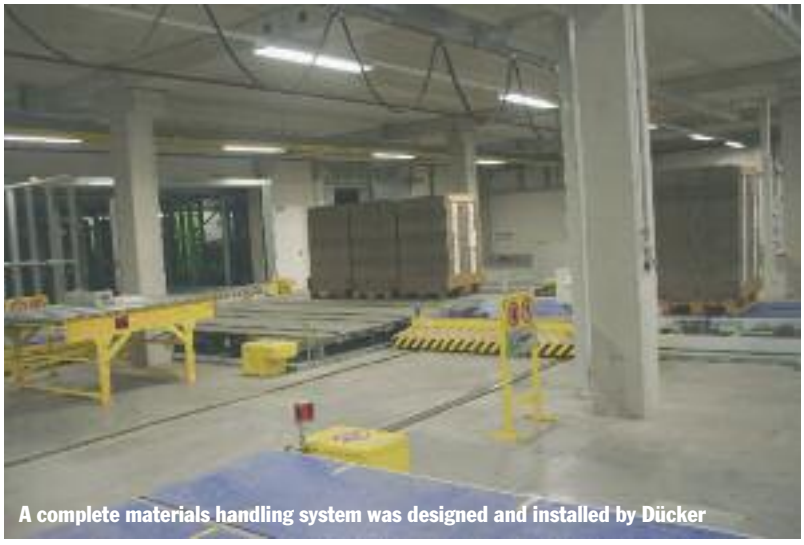
ABSOLUTE ENGINEERING SOLVE FUNDAMENTAL PROBLEMS ON FLEXO CONVERTING LINES AT PACKNERS

NEW CHAMBER SYSTEMS ARE THE ANSWERS!

Bannink Packaging was founded more than 60 years ago in Deventer, Netherlands and began as a sheeplant producer serving the local meat industry. Since that time, the company has continuously developed and invested in new equipment and technology. Today Bannink produces corrugated packaging for the food and non-food industries and offers an infinite variety of products ranging from small to medium, and large size boxes. The company's unusually wide range of state-of-the-art machinery means that it can accommodate virtually every conceivable type of corrugated packaging product to suit any modern customised requirement.

Bannink Packaging made the strategic decision to construct a purpose-built corrugated packaging plant in Schüttorf, Germany in 2011 under the name Packners GmbH. Packners is a joint venture between Dick Bannink and Frank Gausepohl. The masterstroke was that this new plant was strategically located adjacent to its raw materials provider, Prowell. The factory in Schüttorf covers 15,000sqm and there are currently 30 people working there. Production at the site is handled on a four colour casemaker and a four colour rotary die-cutter. They are able to run work in up to 4 colours and convert E, B, C, BE and D flute board. The production capacity in Schüttorf is 150 million sqm and a dedicated high rack warehouse system gives them a capacity for 15,000 pallets.

As Bannink/Packners, the company has a close partnership with Prowell, which supplies the company with corrugated sheet


A complete materials handling system was designed and installed by Dücker

board. Virtually all Packners' processes are automated through interfaces with the raw materials arriving at the company's 'buffer' warehouse from where the material is delivered automatically to the relevant production lines, thanks to a complete materials handling and pallet inserting system from Dücker of Germany.

Machine causes problems

It is not very often that you hear of horror stories in our industry, but sadly Packners suffered over a year of misery following the installation of a new American manufactured flexo rotary die-cutter. "In basic terms, the rotary die-cutter was losing 6kg of ink per colour station, per job change, more than double the expected levels of ink loss seen in other manufacturers machines – and the manufacturer seemed unable to solve the problem satisfactorily," explains Mr Bannink. "In addition to the leaking chambers, we realised that the OEM fitted anilox rolls were not of good enough quality, as the cell structure was not accurate enough to ensure a consistent lay down of ink when the machine was running."

With despair at the situation, the owners turned to Antony Whiteside of Absolute Engineering to try and rectify the problems. The resulting retrofit of complete chamber blade systems and wash-up system now has the machine running to the expected levels of production.

InkSave is an innovative new washup system from Absolute, designed to complement the range of woven carbon fibre chambered doctor blade systems. Absolute have worked in the flexo industry for over a decade, and have incorporated many chambers into existing washup systems. In many instances these systems focus on washing to the detriment of ink loss and wash water volume. In an environmentally conscious industry this approach is now unacceptable.

Over the past two years, Absolute has tasked key engineers with the job of resolving the apparently opposing targets of reduced downtime and quality of cleanliness after washup, against ink savings and minimised water usage. The result of this hard work is InkSave. It is not a standard washup system designed simply to flush water through a chamber to rinse a chamber and anilox. It's a PLC controlled ink recovery system designed to extract the maximum amount of ink prior to washup. This saves money, but also makes washup quicker and easier, as there is minimal ink to wash up.

InkSave also resolves another major headache for operators – colour consistency at start up. Most plants use ink kitchens to provide ink at the press-side that is the correct colour and viscosity. Unfortunately most ink circuits hold residual water from the previous washup. As soon as the ink is introduced it is immediately diluted, which results in delays in production start as operators try to correct the issue.

The InkSave programme is designed to optimise each action in terms of performance and time,

and consists of three cycles:

- Cycle 1 removes the ink from the chamber and recovers it to the ink bucket for re-use;
- Cycle 2 washes the chamber, anilox, pumps and piping to ensure a totally clean ink circuit;
- Cycle 3 recovers the residual wash water in the system.

"The result is typically an 80 per cent reduction in ink loss and water consumption combined with reduced downtime," states Mr Whiteside.

Sheet from next door

By connecting its new production facilities directly to Prowell via a 16 metre high bridge, the company made instant economies on sourcing and logistics. All these resulting economies are passed directly on to its customers.

Dick Bannink said, "As a family-owned company we have always been a flexible partner and able to adjust our production output to suit out client's needs. We mainly serve customers in the Benelux and in Germany, all roughly within a 300km radius of our main manufacturing facilities. Our new plant in Germany is focused on supplying big volumes to the food and non-food industries, as well as many other branches, ranging from cosmetics and industry to furniture and even textiles. Our ultra-modern plant is located at Schüttorf in Germany, near Münster, which lies close to the border with Holland and benefits from direct access to the A31 and A30 motorways. The physical connection between us and Prowell, via a specially constructed bridge, means that we can call for corrugated sheets instantly through our software system. These in turn can be transferred directly to our warehousing complex or go directly to feed our many converting lines." He continues, "This provides us with a highly efficient and eco-friendly supply chain model that minimises waste, logistics and the resulting emissions from unnecessary transportation and also offers further economies in speed of delivery and converting."

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Left to right: Marcel Termaat (sales agent for Absolute), Frank Gausepohl (Packners) and Antony Whiteside (Absolute Engineering)

Mr Bannink added, "We are also able to provide our customers with a highly efficient warehousing and delivery service and secure storage for their products, which can be called upon instantly at any time. Everything we do is driven by our commitment to quality, the environment and to minimizing costs. More than 95 per cent of all our products are custommade to suit our client's individual specifications. However, we do offer a range of standardised corrugated packaging products and are currently extending the range due to an increase in demand. We also see an increasing demand for sustainable products, whereby the certification of raw materials is becoming more important. All our raw materials are produced according to FSC standards and can be recycled after use. In addition we have minimised our emissions to zero with the delivery of our raw materials and are also working with environmentally friendly inks and glue and recycle production waste."

Advanced logistics

Packners customers rely on a special inventory system that can track their product's progress online at any time of the day or night. Customers also benefit from being able to specify precisely what they want at any time and if the order is placed before noon, then the product will be delivered within 48 hours.

In addition, customers do not need to worry about managing a warehouse for their products, as all their items can be stored at Packners' own extensive 35 metre-high facilities and called upon on demand. Mr Bannick states, "Packners prides itself on being the optimal partner for the job when it comes to corrugated packaging, where competitive pricing, reliability, creativity and customisation are all priorities. We also have our own dedicated in-house packaging development division that utilises (ERPA) CAD-CAM systems to design, develop and prototype new packaging concepts for our customers." ■