

It was back in 2002 that W. H. Leary Company became involved with Delta Packaging, the Belfast, Northern Ireland based folding carton producer. At that time, Delta's fries-scoop gluing production line became the first in the factory to have a Leary non-contact gluing and glue detection system installed. Prior to that, the gluer was limited to around 60,000 cartons per hour.

Running at higher speeds was not possible due to gluing quality concerns. Once gluing was recognised as the principal cause of limited production speeds, the company went ahead and invested in new Leary gluing and detection equipment — one of the first UK companies to do so.

Following the installation, Delta observed immediate improvements in gluing accuracy, consistency and quality. This enabled much faster production speeds, which were increased on an incremental basis until ultimately reaching the gluer's maximum speed of over 134,000 cartons per hour. This significant boost in gluer productivity was attributed almost entirely to the newly installed gluing system. Gary Boyd, then Engineering Manager at Delta, remarked,

"This high pressure gluing system has allowed us to run at much greater belt speeds while maintaining very accurate glue line positioning and consistent line lengths. The automatic glue position compensation features really make the difference at the speeds we need to run at. This, along with their disk ejection system, has increased productivity and reduced waste dramatically." Over the last five years, this fries-scoop line regularly achieved productivity in excess of 98 per cent across all shifts, a statistic that the company remains very proud of.

### **Continued improvements**

Five years later, Delta once again focused on the same production line. The goal this time was exactly the same — to make cartons faster while maintaining the existing high quality standards. The existing gluer line was not deemed to be under-performing — in fact it was quite the opposite! It frequently ran entire shifts at maximum belt speeds of 450 metres per minute.

Productivity gains on this line were

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deemed almost impossible — and even if achievable, improvements would certainly be too small to justify any serious investment. Instead, the company explored other options available to increase overall productivity on this, their largest volume contract by far. Gary Boyd, now Project Engineering Manager at Delta comments, “We constantly review and develop our manufacturing processes with the aim of increasing productivity and quality while minimising waste. It was apparent in this case that to further increase productivity we needed a second machine or additional belt speed as the existing production line was regularly running at its maximum speed.”

The extra belt speed was needed in order to make productivity gains. The answer was their Bobst Alpina 75-A2 gluer rated at 625 metres per minute. The three year old Alpina was complimented by a pre-feeder and case packer.

### Gluing constraints

In initial production trials, the gluer demonstrated its capacity to handle the carton, although there were problems with

the installed gluing and detection system. The gluing requirement was to place two single lines of glue on the carton’s two glue flaps. The glue must then be quality inspected and verified “good” by the quality assurance system. Any poorly glued cartons would be ejected from the gluer via the Bobst Flipper knock down ejector.

The existing gluing system on the Alpina failed to keep up with the required production rate, as Gary Boyd explains, “Having outgrown the maximum belt speed of 450m/min on the previous gluer, we began trials on our Alpina 75-A2 with a maximum belt speed of 625m/min. The performance of the gluing and glue detection system at very high speed needs to be accurate, consistent and above all reliable — because the gluing valves are worked incredibly hard. The factory installed system simply could not maintain its gluing accuracy at speeds above 300-400 metres per minute, and as a result we were ejecting

more than 30 per cent during the trials, due to volume and positioning errors.”

Being familiar with W. H. Leary systems and their performance, the company turned to them again to help them prove they could achieve the expected gains. A Leary On-Target™ closed loop gluing and detection system was installed on the Alpina and linked to the Flipper knock down ejector.

### 170,000 Cartons per hour

Following the system installation, Delta achieved a maximum speed of 185,000 cartons per hour and a normal production running speed of 170,000 cartons per hour at belt speeds in the region of 500 metres per minute with minimum gap between cartons. The technology used to achieve the required gluing accuracy is patented by Leary. It works by constantly detecting and adapting to outside influences, such as



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changes in glue viscosity and valve setup, and ensures the glue pattern remains “on-target” and in position on every single carton. This patented technology helped Delta increase productivity further and deliver 100 per cent accurately glued cartons to their customer.

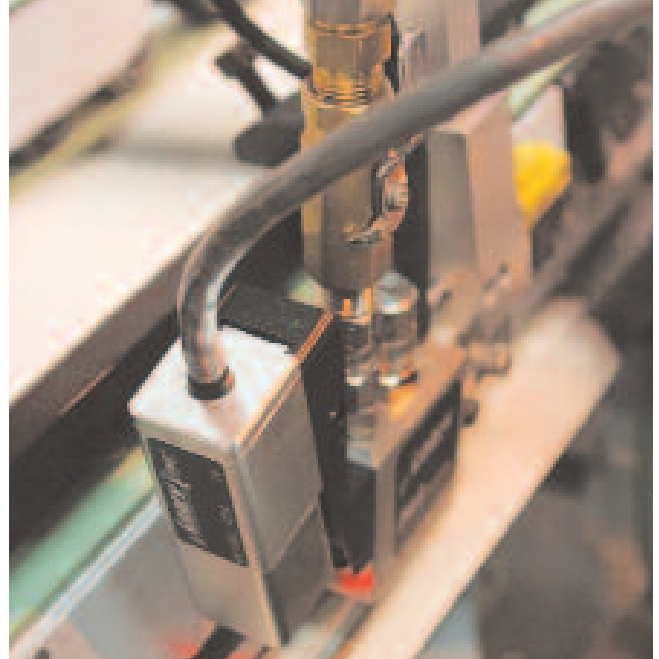
### Making its mark

With over 2,000 systems installed in North America, W. H. Leary claims to be the premier gluing and quality assurance systems provider in the USA. Eight years ago, they entered the European carton market and to date have installed over 100 systems, over half of which are installed in the UK.

As in the case with Delta Packaging, company focus and business philosophies are founded on providing gluing, quality assurance and data collection systems that enhance productivity — a distinction that Business Development Manager, Gary Roberts, believes sets them apart from the competition. “I’ve met with hundreds of carton manufacturers, all of which have a common goal — to make high quality cartons as efficiently as possible. We too focus on that goal. It’s precisely this that has led to our emergence as a preferred supplier to so many end users in the UK over the last three years.”

When asked about supplying systems through OEMs, Gary Roberts explained, “Overseas, some OEMs already fit our equipment as standard. We are committed to demonstrating the benefits of our systems to other OEM companies and believe that in time our systems will be provided direct from more machine manufacturers.”

W. H. Leary has fitted systems to eight new Bobst Alpina folder gluers over the last two years. On all occasions, the carton manufacturer had expressed a specific desire for Leary equipment. “We like to highlight this but remind customers that the choice is always theirs,” concludes Gary Roberts.



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