

Bagging a new lease of life

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When Gelpak wanted to increase production flexibility and reduce downtime with its plastic bag making machinery, it turned to Bosch Rexroth and its partners



Gelpak is one of the UK's leading extruders and manufacturers of films, bags and liners for use across a wide range of industry sectors, from automotive, through to food, healthcare and waste and recycling.

Based in Hereford, the company provides a range of mono and co-extruded polyethylene packaging products available in a variety of colours, plain or printed and including bags, sheets, sheeting, tubing, liners and sleeves, supplied flat folded or tear off on-the-roll.

It was this wide range of products which was causing increasing headaches in the production area of Gelpak's business. In particular, Gelpak was using a number of older Contiflex bag machines, 30 in all, across two sites.

The Contiflex machine is a sealing and perforating unit for production of bags on a roll, such as freezer bags, fruit and vegetable bags, bottom seal bags and small garbage bags. It has a production speed of up to 70 metres per minute and is capable of up to 150 cycles per minute. Crucially, it is capable of variable sealing width with a maximum of 350 mm and a bag length from 315–1200 mm.

Derek Mumford, works manager at Gelpak, wanted to reduce downtime and increase operational flexibility of his Contiflex machines. "We were looking for better performance from the Contiflex machines, in particular because we were having

some problems with the clutch unit which was causing downtime and was expensive to replace.”

He continued: “There was also the issue of flexibility. Changeovers to different bag sizes and parameters were done manually, which was taking up a considerable amount of production time. We therefore started looking for a more automated solution.”

Gelpak turned to Transicon, a Bosch Rexroth technology partner company and a leader in the field of electrical control, drive and automation systems. Transicon’s expertise lies in the retrofitting of older machines across a variety of sectors including automotive, roll-feed machines in metal forming industry and the packaging sector.

“We decided to send a single machine to Transicon for a refurbishment to improve the accuracy and changeover and reduce the maintenance times,” says Derek. “Then we could assess the improvements before going ahead with any more machines.”

“Gelpak asked us to upgrade a Contiflex bag machine from an existing mechanical clutch variator system and a mechanical SRA speed variator which was driven from one motor,” says Richard Cotsford, sales and marketing director at Transicon. “Their goal was to improve the accuracy and repeatability of the machine, by replacing the existing mechanical speed variator and lessen the amount of downtime by replacing the mechanical clutch.”

Richard continued: “We felt we could improve product accuracy, reduce maintenance costs and downtime between product changeovers. After looking very closely at the machine and Gelpak’s requirements we recommended replacing the control panel to incorporate the use of Bosch Rexroth servo drives and control system along with a touchscreen HMI which would make significant savings on changeover times.”

Most of the electrical and mechanical work was completed within a 10-12 week timeframe and Gelpak are confident the upgraded machine will improve productivity and manufacturing flexibility.

“The big benefit will be in changeover time, in that the machine is now much easier to set up when we have to change the type of bag being produced,” says Derek. “With the upgrade we are hoping to save 3-4 hours for each changeover.”

Richard Cotsford believes that Transicon’s experience with Gelpak will open up opportunities with other Contiflex users. “This has been a very successful conversion and we are now rolling-out the Bosch Rexroth solution to other Gelpak machines and to other customers, offering this as a standard package for the FAS Contiflex range of machines.”

He continues: “We have developed the capability to give the Contiflex machines a new lease of life. Machines can be delivered to Transicon, reworked and up graded for delivery back to the customer to reinstall in the production line with minimum disruption to production schedules.”