EVOLUTION FOR RIGID

UK-based Rigid Containers continues investment at Selby plant with installation of Göpfert Evolution 16/24 rotary die-cutter

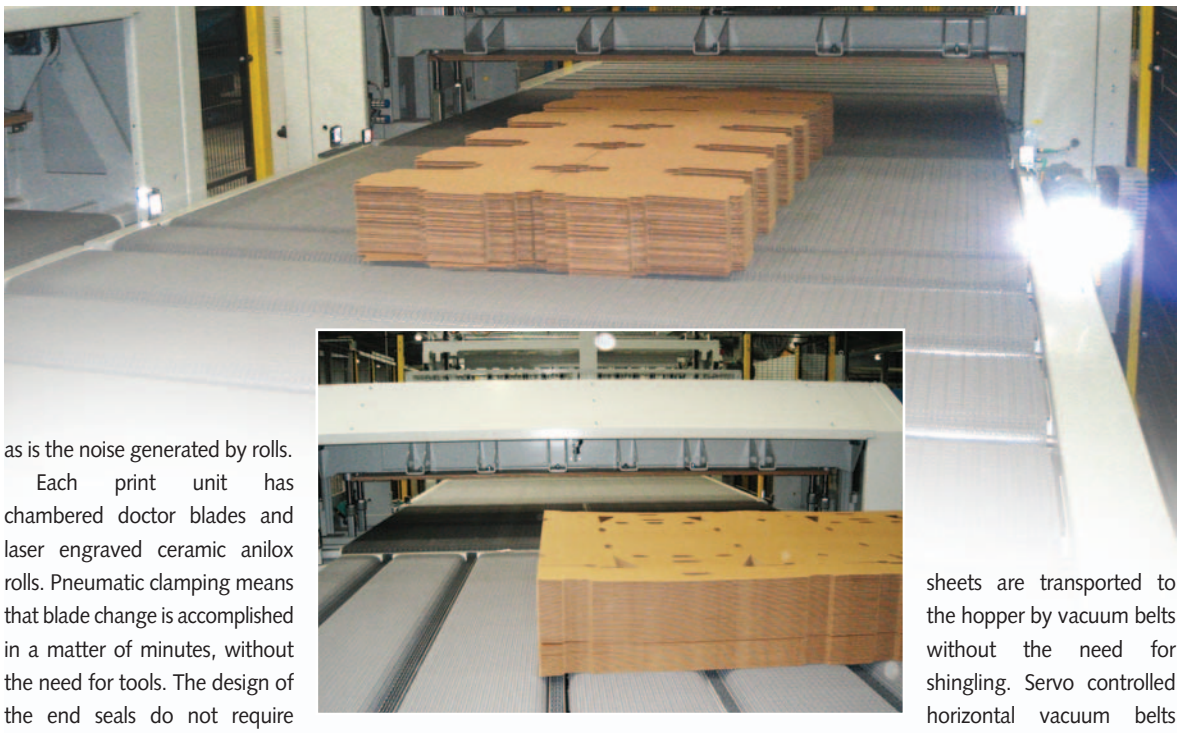
Rigid Containers Ltd continues its ongoing programme of investment at its Selby, North Yorkshire, production facility. In a move to further increase capacity, boost throughput, reduce high volume operating costs, extend customer choice and enhance post-print quality, the plant has installed a four colour, Evolution 16/24 rotary die-cutter. The unit has a working width of 2400mm and a cylinder circumference of 1550mm. Maximum production speed is 10,000 sheets per hour.

Other major benefits include a move from three to four colour rotary die-cutting; ultra-tight print registration allowing customers to switch from pre-print and simple litho to high volume post-print; lower origination costs and an ability to produce rotary die-cut trays at higher speeds.

Introduced in 1998, and with over 120 units installed around the world, the Evolution rotary die-cutter features the company's true direct drive system. With a servo motor on each roll and all major positioning axes, print and die-cutting register can be accurately controlled and repeat orders run with minimal machine setting. By eliminating gear or belt drives between rolls, backlash is a thing of the past, machine reliability is greatly increased and maintenance requirements reduced.

The machine is equipped with a vacuum lead-edge feeder, which is fitted with four sets of friction rolls to ensure positive, accurate feeding. Automatic setting of the stroke length means that the feeder is optimally set for each individual sheet length. A self-contained cyclone collects the dust from the feeder vacuum.

Sheet transport through the machine is by servo driven vacuum belts. These provide positive sheet control, with no scuffing. The slight sheet hesitation that can be encountered with transport rolls or wheels, which may affect print register, is eliminated,



as is the noise generated by rolls.

Each print unit has chambered doctor blades and laser engraved ceramic anilox rolls. Pneumatic clamping means that blade change is accomplished in a matter of minutes, without the need for tools. The design of the end seals do not require lubrication and offer an extended life compared with felt or foam seals.

The print cylinders are fitted with Quick Lock plate mounting to keep set-up time to a minimum and provide repeatable plate tension for run-to-run consistency.

Taking advantage of the servo drives' accuracy, the Göpfert APM system enables the operator to easily and quickly adjust the print length on each unit to compensate for plate stretch. After any stop, re-registration is achieved within one revolution of the cylinders. Once print registration is set, the position of the print relative to the sheet lead edge or to the die cutting is adjusted by a single input — there is no need to re-adjust each print unit.

Precise control over the anilox roll and impression cylinder settings, again through the use of servo drives, together with the vacuum belt transport, delivers true "kiss touch" printing.

The ink system uses dual pumps for the control of the supply and return, and a mixer helps minimise any foaming. The print units can be washed on the run with the operator selecting a wash cycle program to suit the colour change.

On the die-cutting unit, independent servomotors on the forme and anvil cylinder again eliminate the need for any gear drives. Not only does this provide backlash free control, but also isolates the unit from the print units ensuring that the cyclic loads of the die-cutter do not have any affect on print registration. The precise vacuum belt transport into the unit means that there is no requirement for re-register prior to die-cutting.

Fast set-up is achieved through the use of a quick mount cylinder for the cutting formes, which eliminates the need for multiple bolt fixings and a die-cut change-over can be achieved in around five minutes.

The cutting surface of the anvil is maintained through the use of the MicroGrind system, which trims the anvil at pre-determined intervals during production. For the highest die-cutting accuracy the anvil speed is automatically adjusted to compensate for diameter reduction, ensuring that the surface speed accurately matches that of the sheet. Many jobs which were once considered only suitable for flat bed die-cutters can now be run with the benefits of the higher productivity offered by the Evolution.

The Göpfert Evostack is a batching stacker designed to deliver batches of die-cut sheets to a two-way breaking system. Once through the beater section, the sheets are transported to the hopper by vacuum belts without the need for shingling. Servo controlled horizontal vacuum belts deposit the sheets into the hopper in a controlled manner, without them hitting the backstop. This approach ensures the smoothest operation and eliminates the major causes of jam-ups such as interlocking sheets or flaps folding back. The design of the Evostack means that there is no feed interrupt for batch ejection, even at high machine speeds.

Since becoming part of VPK Packaging, Rigid has quickly evolved from a product-focused company to a service organisation, concentrating on customers' specific needs in terms of tailored packaging solutions, supply chain optimisation and just-in-time deliveries.

The company has been an industry leader in meeting the demands of the modern supply chain in the UK by introducing innovative, integrated manufacturing and logistics facilities incorporating large warehousing capabilities — providing an unrivalled ex-stock service.

The company opened its new, state-of-the-art manufacturing and logistics facility in Selby in 2005. In addition, the company's extensive Desborough production site has also been significantly expanded to include an advanced new warehouse and sophisticated logistics centre.