



A report by Daniel Brunton

EVOLUTION UNDER STARTERS ORDERS AT

# RIGID

A £3.5 MILLION INVESTMENT ALLOWS ENTRY INTO THE DECORATIVE HIGH GRAPHICS MARKET FOR LEADING UK INDEPENDENT

**R**igid Containers, one of the UK's largest independent corrugated boxmakers, continues to invest in the latest converting equipment, the most recent installation being a six colour flexo rotary die-cutter. The machine in question — a Göpfert 16/24 Evolution — is capable of producing some of the best quality post print graphics on

corrugated. It has been installed at the company's flag-ship site in Selby, near to the existing four colour Göpfert Evolution that was installed three years ago.

"This latest series of investments, valued at over £3.5 million, is further proof that VPK, our parent company, has complete confidence in our market development," comments Richard Coward, Managing Director. "With the best in high quality flexo print capability, we are now in a position to significantly expand our range of 'stock and serve'

facilities, especially as customers require more and more high quality graphics on their Retail Ready Packaging solutions. While we have always been able to offer high quality print to our customers — serviced from our sister company in Belgium, or sub-contracted in the UK — we are now in a position that we can handle every type of job in-house. We can bring a real just-in-time service for high quality decorative packaging, thanks to our warehouse for stock draw-down.”

As well as machinery, the company recently recruited a new Sales and Marketing Director, Julian Freeman. Mr Freeman has spent many years in the industry — not just corrugated, but also folding carton. “I am really excited to be

investing in machinery; we have invested heavily in our people too. From the operators through quality control and to the sales team — everyone has been taught to think like printers, not just boxmakers. With the help of the equipment and service suppliers, we have taught our team all about high quality print. The team all understand we are embarking on a really exciting period of the company’s development, and that we need to really know what we are talking about. As well as weeks of training in Germany at the Göpfert facility, we have worked closely with our repro partners, V + W Graphics. The assistance and support that they have given us is first rate and we are really looking forward to

seeing our relationship develop. They are one of the best in the UK, Mark Vaus and his team do a first rate job. We also had assistance from our ink and anilox roll suppliers — Antonine Inks and Apex. Within a matter of days, we were printing work with tolerances of +/- 0.1mm, which is fantastic.”

### State of the art

Mr Coward continues, “We requested a very high specification machine from Göpfert and opted for JB Infrared Dryers and the highest quality doctor blade systems, which allows us to achieve exceptional print quality on all types of board — this has enabled us to go to market with real confidence.”

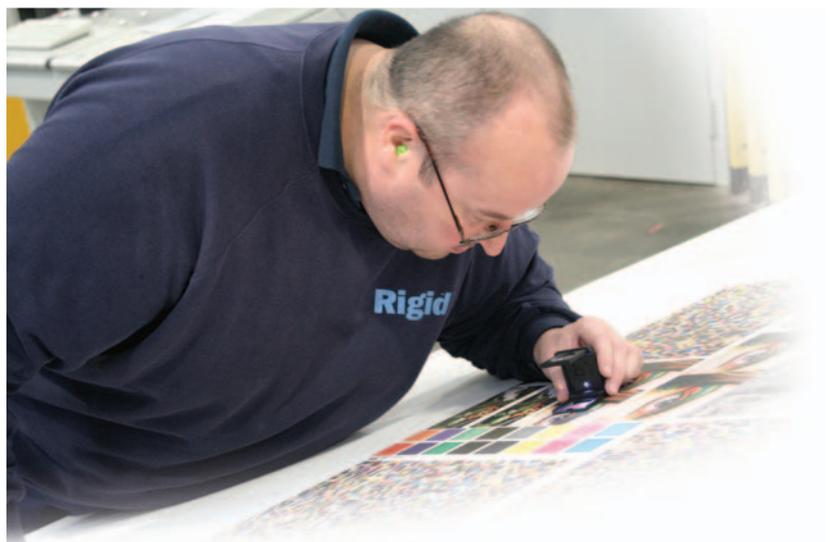
This modular machine is equipped with six print units and has a maximum working width of 2.4m, with left hand drive and a maximum speed of 10,000 feeds per hour. The machine configuration was defined specifically for high quality printing. It is equipped with true direct drive with servo drives on all rolls and cylinders and benefits from Göpfert’s experience in the design of servo drive systems. The positioning accuracy and register control resulting from this system ensures that repeat orders are consistently produced to the same high quality as the initial set. Sheet transport is by vacuum belts throughout the machine. The use of belts provides maximum grip of the sheet and prevents any sheet movement. A sheet cleaner installed before the first print



Richard Coward,  
Julian Freeman and  
Steve Roche

back in the corrugated sector, having spent the last few years developing my knowledge of decorative packaging in the carton sector,” explains Mr Freeman. “The addition of the new Göpfert machine will allow me and the sales team to really push the boundaries of traditional work that Rigid is so well known for. We are now in a position to offer the highest levels of print to our well established customer base, and the reaction from customers to date has been fantastic.”

Training has been a key ingredient in this ambitious move into high quality graphics, as Steve Roche, Site Director (Selby), explains; “It is not just about



unit ensures that the sheets are in perfect condition prior to printing. The print units are equipped with:

- Absolute Engineering's leading chambered doctor blades with automatic blade life indication;
- Quick change laser engraved ceramic anilox rolls, the machine being supplied with a total of ten rolls for line, block, process print and varnish;
- Servo positioning of the anilox rolls and impression cylinders with the settings adjustable in 0.01mm increments;
- Pneumatic clamping of the printing plates, for consistent tension;
- Angular adjustment of the printing plates;



- APM print length adjustment to compensate for print stretch or shrinkage;
- The automatic wash-up will be complemented by a chemical dosing system to ensure that the anilox rolls are kept in top condition;
- Infra-red dryers from JB Machinery — five Interstation Flexo Dryers and one Final Flexo Dryer.

A transfer station between the last print unit and the die-cutting section provides additional drying time and space for the larger Final Flexo Dryer. The doctor blade systems have been supplied by Absolute Engineering — “We are delighted to have been selected for this prestigious project with Rigid and Göpfert,” states Antony Whiteside, Sales and Marketing Director of Absolute. “We believe the Absolute 2G is ideally suited to the high quality post print market and that our chamber system

complements Göpfert's engineering excellence and Rigid's ambitions in this decorative sector.”

The rotary die-cutting unit has full independent servo drives to the forme and anvil cylinders, providing precise positioning and speed control. The anvil is kept in good condition by the Microgrind system, which runs during production without operator intervention. After each grinding cycle the servo control of the anvil cylinder automatically adjusts the surface speed for the change in anvil diameter ensuring consistent, accurate die-cutting. To keep setting times to a minimum the machine is fitted with a Serrapid quick mount forme cylinder.

Die-cut blanks are carried by vacuum

belts to the Evo-stack batching stacker. Designed to minimise the possibility of jam-ups, the Evo-stack does not shingle the cut blanks, even at full machine speed. The batch building is carried out by overhead servo driven vacuum belts, which decelerate each blank to prevent it hitting the back-stop, eliminating leading edge damage. A diverter between the beater section and the Evo-stack allows the operator to easily remove blanks for inspection during order set-up, or at selectable intervals during production for quality control.

All the machine functions and settings are controlled and stored by the Göpfert CNC system, which also integrates the Alliance pre-feeder and Dücker Corpal breakers, load former and take-off system into the machine.

In an effort to maintain the consistency and quality of print production, Rigid also made the decision to purchase a MicroClean™ Model 132 anilox cleaner from Flexo Concepts. MicroClean is a totally dry, off-line anilox cleaner which operates with no water or chemicals. A recyclable plastic media is used to blast the anilox roll surface at a relatively low pressure and effectively remove any contamination from the anilox cells. Due to the recyclability of the plastic media,



Alliance supplied the pre-feeder for the new line



the system's operational cost is low, and there is virtually no waste material that needs to be disposed of. MicroClean is also a fully automated system; once the operator has loaded the roll in the machine, he merely selects the cleaning programme, hits the button and walks away. When the cleaning cycle is complete, the roll is press-ready.

"We believe that the MicroClean unit should be used as part of a preventative maintenance programme within a plant, where rolls are cycled through the machine on a regular and consistent basis," explains Dave Burgess, VP of Sales for Flexo Concepts. "This will ensure that anilox roll density is maintained, anilox life is extended and print consistency is maximised."

The machine is located in a separate 'clean' area in the Selby factory. A completely integrated dust and waste removal system has been installed, and dust particles are removed and made into briquettes by a Kee Environmental extraction system. The system is also used to remove hot air from the machine and used in heating the factory during winter.

### Other investments too

The choice of the Göpfert flexo rotary die-cutter follows hot on the heels of other investments. "We upgraded the corrugator at Desborough with the addition of an E-flute cassette and an E&L bridge control system," explains Mr Coward. "We also installed a SuperNova2 speciality folder gluer line at Desborough, similar to the one we have at Selby, as well as putting in a flat bed die-cutter."

Manufactured by UK-based Andrew & Suter Ltd, the SuperNova2 speciality



**A complete bundle breaker and palletising system was supplied by Dücker Corpal.**

gluer is designed to handle a wide range of board combinations from the most delicate litho laminated micro flute to double wall in a wide range of designs. "Since we designed the SuperNova, it has proved to be popular with both sheet plants and board plants alike," comments Mark Suter, Managing Director of Andrew & Suter. "With installations all over the world the machine has proved its reliability and versatility. It is always gratifying to receive repeat orders and having installed a SuperNova 2 at Rigid

Selby, we were delighted to install a second unit at Desborough. The machines have been a success at both locations."

"Thanks to the 'mirror' sites, we have been able to reduce the amount of inter-site transportation, as we can now produce E flute from both sites, all helping us reduce our carbon footprint," continues Mr Coward. "It also means that we have identical manufacturing capabilities at both sites, which is a critical element of our corporate Disaster Recovery strategy in case one of the sites was to be inoperable for any reason."

Mr Coward concludes, "These are certainly exciting times for us. The operators and management alike are up for the challenges ahead, and we will be unveiling additional investment plans in the New Year."





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