



Graham Jones, chairman Acorn Maltone and George Russell managing director

Breaking with tradition

The name George Russell will be familiar to many in the European labels business as the character who ran the UK sales operations for Didde and Aquaflex in the 1990s, before moving on to Edale. Disillusioned with the press salesman's life, Russell made a high risk, but highly rewarding career move back to the coal-face - as a partner in Lincolnshire, UK-based Acorn Maltone Labels. It will come as no surprise to those who know him that interesting plans are afoot.

It was clear to Russell from the outset that there would be little point in establishing another 'me too' operation, and Acorn Labels is now the proud owner of one of the first ETI Metronome flexographic presses to be sold in Europe. Some words of explanation are in order.

The decision to opt for the new ETI machine harks back to the days when Russell was selling Aquaflex presses. One of his key accounts was his present-day partner Graham Jones, who bought three Instaprep 8-color 10in machines for his Clearprint Labels operation in Preston, UK. When, three years ago, Jones offered him the chance to try his hand at growing a medium-sized print business in the group, Russell jumped at the opportunity. Since then Acorn Maltone has moved into new premises and gone from strength to strength.

Acorn specialises in the food and industrial labels sectors, with 80 per cent of its work produced for the trade. Russell has

George Russell has moved from selling Aquaflex and Edale presses to running his own labels printing business. Now he plans a revolutionary laminate manufacturing and printing operation.

Andy Thomas reports

big plans: 'The aim is to grow the business and move towards added value synthetic label production on the ETI press. My ultimate goal is to transform the company from a label printer into a manufacturer. We want to be able to print first, and then make the label itself, which is where the margins are much higher. We're now at the first stage, and the ETI Metronome press will eventually form the basis of this in-line print and manufacturing operation.'

ETI provides another link to George Russell's past, since ETI president and founder Francois Bayzelon was originally the founder of Aquaflex/Chromas. Five years ago he struck out on his



Left: print unit featuring quick set-up SAPS system (see box below), below left: Metronome press, below: Auto Peel-off allows waste stripping to start automatically



“ETI’s Self-Aligning Pressure Setting system allows instant and automatic adjustment of anilox and printing pressure in around 10 seconds per print unit”

SAPS changeover sequence

1. The gauge is placed between the anilox and substrate
2. The plate cylinder holder is locked in the right position, in reference to the gauge
3. The gauge is removed from holder and replaced by the plate cylinder
4. Plate cylinder is perfectly aligned and ready.

own to develop a concept for a one pass printing and manufacturing system for pressure-sensitive coated labelstocks. The Metronome is the printing line, and the Cohesio (see below) the label manufacturing section.

The 8-color Metronome press installed at Acorn Labels is 13in wide to match the web width of the Cohesio manufacturing line. Available in web (print) widths of 10” (254mm), 13” (330mm) and 16” (406mm), the Metronome can be UV, waterbase or a combination of both, and is configured for the full range of film, paper and pressure sensitive paper products which can be run through the Cohesio coater in a thickness range between 0.001 – 0.010in (25 – 254 micron). Maximum press speed is 500 ft/min (150 m/min). Repeat length is 8-24in (203-610mm).

George Russell cites the key benefits of the Metronome press as its durable construction, unique quick makeready cassette print heads and innovative drying system. ‘We needed a machine with the best possible registration available and ultra-fast makeready. Obviously the marketplace can only become more competitive and this machine will help us service our key trade clients.’

Key design concepts set the Metronome apart in this very crowded

market:

- The over-sized 16in Impression cylinder means the dot is in contact with the plate for longer and prints flatter, so forming a better dot shape. ‘It prints flat, more like a litho environment,’ enthuses Russell. ‘Having the very big impression cylinder and one inch steel sideframes provides massive stability, making it very rugged and very stable on process work, and not sensitive to speed variation. Longer dwell also helps ensure the dot is cured.’ The press is configured with Hot air and IR combo drying, ‘a lot of drying power for waterbase inks,’ points out Russell.
- The Metronome is configured with an anilox cassette system and plate cylinder carriers, mounted on carts, which allow the print units to be exchanged in around a minute. Furthermore, any anilox cassette is interchangeable with a silk screen or die cutting cassette, with an equally fast changeover time. The dual horizontal die-cut station allows easy access and fast change-over using the cassette and cart system.
- ETI’s unique Self-Aligning Pressure Setting system (SAPS) allows instant and automatic adjustment of anilox and printing pressure in around 10 seconds per print unit (see SAPS boxout).

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Cohesio laminate manufacturing system from ETI is Acorn's next move

- The company's patent-pending Auto Peel-Off system allows waste stripping to start automatically, without having to stop the press and manually roll waste around the rewinder. The roll is split with a knife which takes the matrix to the rewind without manual intervention, eliminating the risk of paper tearing during peel off.
- Makeready is carried on outside the machine in the removable cassettes. ETI says a six unit changeover can be performed in around 10 minutes including changing all print and converting cassettes, setting impression and running up to print.

From label printer to manufacturer

The next stage at Acorn Labels will be the installation of ETI's Cohesio labelstock manufacturing system. About 12 metres (30 feet) long – the same footprint as the Metronome – the Cohesio is a complete label manufacturing line, flexible enough to let converters produce any kind of pressure-sensitive material in-house, from basic self-adhesive paper to complex multi-layer applications.

The release paper and face stock are simultaneously unwound and led through the Cohesio with independent electronic tension control on both webs. The liner is first coated with silicone, then with the adhesive before lamination to the face stock. The Cohesio can be equipped with an in-line, registered rotary die-cutter which allows final labels to be converted in one operation. Two print units can be added to the Cohesio, or for a full-color operation, it is run in tandem with the Metronome press.

Once the label stock roll is ready, it can be replaced on the machine as face stock and re-run with another roll of liner, enabling production of multiple layers to make piggy back, coupon, or back-to-back labels. Other interesting decoration options include embossing before lamination.

'Double-sided PP labels seem to be the next trend,' says Bayzelon. 'And while label printers are struggling to print on the inside, or to multiply layers, label manufacturers have the easiest solution.'

Other key possibilities include linerless labels and insertion of

electronic chips and spiral antennae for RFID applications before the glue is applied – avoiding the necessity for delam-relam.

Although the second web can be used to run an overlamine film, a more interesting possibility is to print on the reverse of clear film before the adhesive is applied. This avoids the requirement for extra laminations or varnishes, since the print is sandwiched between the film and the adhesive. This also delivers a high gloss finish and means you can use cheaper, water-based flexo inks, since rub resistance is no longer an issue. 'People mainly buy UV for its hardness and resistance. Here, the waterbase is rock solid between the face and the adhesive,' points out Bayzelon.

Running the Metronome printing press in tandem with the Cohesio leads to a reduction in waste since only the face stock is being processed through the Metronome press – rather than the complete laminate.

Because you can coat the liner before siliconisation – using UV or waterbase systems – you can use a very wide range of different material qualities and types, including film.

Becoming your own laminator gives the converter the freedom to use any glue system from hot melt to the cheaper acrylic systems. UV silicone is an exciting technology for an in-house coating operation since it does not require major drying ovens or modifying the PH by re-moisturising the web. You also have full control over the choice and pattern application of the adhesive, giving full control over perf or peelable constructions for example.

For narrow web printers there is a 10 per cent additional coverage across a 330mm web, since most coatings stop 2mm from the web edge. George Russell has done his own calculations on the payback to be expected from the Metronome/Cohesio combination, including the savings to be made from buying raw materials direct instead of in a finished laminate. He estimates a minimum requirement is a turnover of £2.5M on labels, which means a spend of £1M in raw materials. Return on investment works out at under a year. ■

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Acorn kit list

Apart from the Metronome press, Acorn is an Edale house, with the most recent installation a 6-color Edale Beta 250. Two 13in Rotoflex slitter rewinders have been installed to be compatible with the Metronome. Acorn handles its own platemaking, with an Agfa Accuset 800 imagesetter and BASF Combi F1 platemaker. 'We've had a look at CTP, but we're not ready yet,' says Russell.