

Finishing: broad spectrum in single production pass

INLINE PACKAGING PRODUCTION. Gallus and BHS held a customer event for folding box manufacturers at the Ebergöns demonstration centre and the BHS factory at Weiden. Following the takeover of BHS, Gallus presented itself as a new full service supplier for packaging and folding box production – with inline printing and converting systems offering a broad range of capabilities.

During the event, Gallus presented its new KM 510 S to folding box printers from Europe and North America. This is capable of handling almost the full spectrum of product finishing in a single pass. BHS also offered the opportunity to attend the factory inspection and approval of a folding box press. Taken together, these events provided a glimpse of the full range of what is a new, full service supplier for packaging and folding box production in the form of Gallus/BHS. The new Gallus KM510 S is available for demonstrations, printing tests, training courses and trials in the demonstration centre immediately adjacent to Gallus Druckmaschinen GmbH, the German production plant of the Gallus group, where the narrow web folding box machines are built. At present the Gallus group as 670 employees working at four plants. The main plant and headquarters (Gallus Ferd. Ruesch AG) are at St. Gallen (CH).

BHS. BHS Druck- und Veredelungstechnik GmbH of Weiden employs 120 people in the building of medium and wide web flexo presses, as well as packaging gravure presses and flatbed die-cutters. Gallus took BHS over in 2006 in order to establish itself in the folding box market but even prior to the takeover the two companies had been co-operating in the development and building of narrow web flatbed die-cutters. In 1925, Gallus built the first label printing press and boasts the largest number of narrow web press installations around the world in the labels market. Following the takeover of BHS, Gallus is creating an independent folding box division based in Weiden, Germany. Gallus/BHS is now able to offer folding box presses with web widths from 410 mm to 1,650 mm and printing speeds from 150 to 600 m/min. Since 85% of the folding box market is still in the hands of sheet-fed offset, the potential market for flexo is

considerable. BHS has been able to firmly establish itself in the North American market, with a larger number of flexo press and inline die-cutting installations in the folding box market.

THE KM 510 S. The Gallus KM 510 S, which was presented by Gallus in the demonstration centre, is an 8-unit press that on the occasion of the demonstration was equipped with a screen printing unit and a hot foil station. The first print job was a five colour piece of cosmetic packaging with screen-printed glitter ink and hot-foiled silver that was then creased and die-cut by the inline flatbed die-cutter. Next to be printed was a blister package with single colour printing on the reverse and four colour printing with blister coating and a window cut out on the front.

The change from one job to the next took two operators 20 minutes. The folding box with hot foil stamping was printed at a web speed of 65 m/min whereas the blister packaging ran at 110 m/min. A 70,000 run of this folding box job was printed for a cosmetics company in less than four hours inclusive of makeready time.

COMPARISON WITH OFFSET. Had this piece of packaging been produced using traditional sheet-fed offset it would have involved four separate steps – offset printing, hot foil stamping, screen printing and die-cutting – and required up to three days. Four hours compared with three working days. The Gallus KM 510 can be equipped with up to 16 printing units, usually with a non-stop reel changer with a 1,500 mm reel diameter and an infeed unit with dust extraction. Web turning means that the first printing units can also be used for printing the reverse side. The printing units are all directly driven and can be fitted with a choice of hot air dryer and/or UV radiator, which means that water-based and UV inks can be used. Features of the printing units include closed chamber-type doctor blades, sleeve technology for the printing formes and anilox rollers as well as cooled calendar rollers on each unit. It has a maximum



KM 510 S in the Gallus demonstration centre: 8 printing unit press equipped with a screen printing unit and a hot foiling station for the demonstration. The first job was a five colour piece of cosmetics packaging, screen-printed glitter ink and hot-foiled silver which was then creased and die-cut by the inline flatbed die-cutter (picture).



The 9 colour BHS Intro L AFL 1259 press with a web width of 1,295 mm configured for printing with water-based inks and UV coating.

web width of 510 mm and repeat lengths of between 304.8 and 660.4 mm. The top mechanical printing speed is 150 m/min, which means that maximum production speed for the flatbed die cutter is between 12,000 and 18,000 cycles per hour depending upon the printing forme/die length. It is able to handle board up to 450 g/m² or a thickness of 0.6 mm. Besides flexo printing units, the press can be equipped with screen printing units, hot foiling units, cold foiling units, hologram application stations, film lamination stations, rotary embossing and

die-cutting units; and these units can be interchangeably placed at different points in the press. A gravure unit is available but this needs to be installed as a fixed unit. The first presses of the Gallus KM 410/510 family were installed in 2002 and there are now installations in Europe and North America.

THE INTRO L AFL 1259. At Weiden, BHS showed the L AFL 1259 with a web width of 1,295 mm, printing lengths from 432 to 1,016 mm and a printing speed of 400 m/min. The press had nine printing

units configured for water-based inks. Units 1 and 2 were reversible for reverse side printing and units 1, 2 and 9 were also fitted with UV dryers for special coatings.

When it is installed in the USA it will be fitted with non-stop unwinders and a festoon and a non-stop reel rewinder from Martin Automatic. It is equipped with automatic wash-up systems for the chamber-type doctor blades and anilox rollers, two separate double-sided web cleaning systems at the web infeed, an automatic BHS print register control, a Web Video Smart from Eltromat and BHS's Promet Press Management that monitors all aspects of the press including maintenance and intervention programmes, a modem connection to BHS and the capacity to store data for up to 10,000 jobs. Four touchscreens mean that everything, including engaging impression, can be controlled from the press desk. It requires a crew of just one printer and one reel handler. Configured for board, this sleeve press has permanently locked carrier spindles. It will be installed in North Carolina.

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