€5 million investment at MONDI PACKAGING BUX

Jumbo casemaker and materials handling equipment installed to cater for growing demand in large format printed and glued case work.

Mondi Packaging, a division of Mondi, has just completed a €5 million investment at one of its sites in south Norfolk, England. The core of the investment is a 4.5m Bahmuller/Göpfert (BGM) Container Line casemaker with pre-feeder and stacker — the latest technology presented by BGM — and an automatic materials handling system, manufactured by Dücker, that includes an integrated pallet inserter line for increased efficiency in handling work-in-progress and finished goods.

The new casemaker produces high quality corrugated products and allows quicker setting for cost-effective manufacturing — converting various board grades from B flute to triple wall.

Mondi Packaging Bux specialises in the manufacture of large boxes. Over the years, the plant has built up a reputation of being one of the UK's leading manufacturers of wire stitched boxes. This latest investment in the BGM 16/45 Container Line equips the plant with increased capabilities to manufacture large one-piece boxes, pallet boxes and octobins — with either stitched, glued or tape joints.

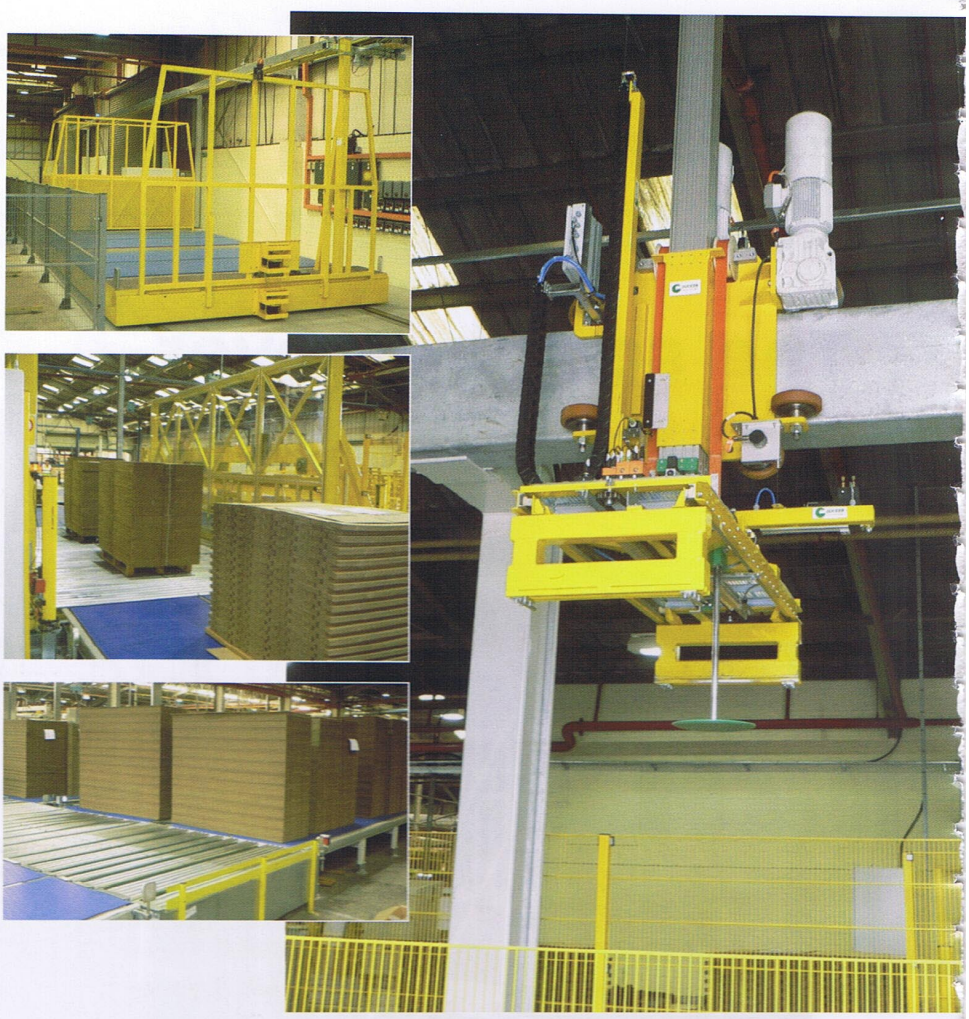
In detail, the new casemaker provides the capability to manufacture up to 900,000 sqm of wire stitched cases a week. Few UK plants have such a high wire stitched capacity. By using reinforced taped joints, which are hot melt sealed, the plant can offer cases with joints that are physically stronger than most other glued joints — in effect offering a "Super Joint" for extra security. The BGM also allows short set-up times, giving customers ordering flexibility — thus reducing their stock holding.

Capable of handling sheets up to 4500 x 2100mm, at up to 6,000 sheets per hour, the machine is equipped with options for gluing, stitching or taping. Together with the well established Göpfert print quality, proven in over 100 successful installations of Jumbo machines around the world, the Container Line opens up exciting new possibilities for Mondi Bux.

The solid design of the slotting and die-cutting units means that almost every product style can be produced. Multi-functionality is a major feature of the machine design. The feed unit is a full width vacuum lead edge feeder which is fully motorised and CNC controlled for auto set and is fully integrated with the Göpfert designed pre-feeder. Special design features include sheet brakes for low friction and skewed sheet detection.

The print units have a high level of automation as all the relevant axis are computerised for fast and easy set-up. With a one to one ratio between the plate and impression cylinders, repeat accuracy is guaranteed and hard rubber creasers can be used to provide reverse creasing

The twin slotting units are equipped with tools for pre-crushing and creasing and contain two slotting shafts. The design of the units incorporates full 360° running register adjustment and an extended slotting capability. When used in combination with the rotary die-cut unit, the Container Line is capable of producing product in a wide range of shapes and sizes. Göpfert's experience as a manufacturer of rotary die-cutters is evident in features such as the quick-lock die-cut cylinder and the synchro drive for the anvil cylinder. The latter ensures that the anvil speed is easily and accurately adjusted for the trimmed anvil diameter.



Materials handling solutions from Dücker included transfer cars, pallet inserters and plastic chain conveyers.

The folding section from Bahmüller is the latest servo drive three bridge design which is equipped with patented stepped folding belts. These ensure accurate, square folding and gap control and eliminate many of the causes of fishtailing. The independent servo drive to each side means that mechanical drive shafts and cross shafts are eliminated, providing easier operator access and precise control of the folding. When running stitched or taped work there is an additional aligning section, which is again servo driven for accuracy and does not require any manual adjustment when running in skip feed mode.

For high speed stitching, Mondi

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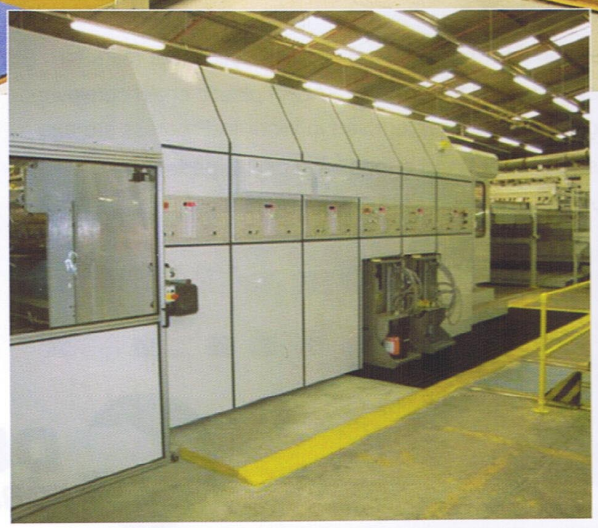
Packaging Bux opted for a direct drive tandem stitcher capable of up to 1250 stitches per minute per head, equipped with an automatic lubrication system and rapid change tooling. Automatic setting of the position and caliper of the transport bridges, together with automatic caliper setting for the stitching heads reduces set-up time and operator errors. The independent hot-melt taping unit, which is capable of being run on its own or in combination with the gluing or stitching heads, provides even more product options.

At the take-off, the cases are collected in the drying unit after sealing and then taken via two independent conveyors to the stacker. This latest design of stacker provides precise stack alignment for regular cases and irregular die-cut products. The intermediate forks optimise the stack change and eliminate the need to reduce machine speed during the change-over.

"The machine's fully integrated rotary die-cutting system allows the production of display packs for the retail sector and manufacturing of large die-cut trays to a maximum size of 2000 x 3600mm," explains Melvyn Mabbutt, Managing Director of Mondi Packaging Bux. "A two colour printing section allows customers to include their logos, marketing messages and safety symbols on their jumbo boxes. Not only that, we can now supply large glued cases of a size up to 1200 x 1200 x 1000mm for the first time. As of the autumn, we will also be able to offer heavy-duty cases manufactured from CA board — this will make us one of only three integrated plants in the UK to offer such a product."

Further new products to be launched in 2007 include:

- octobins for bulk products;
- palletised containers for air freight;
- large bulk display bins for use in hypermarkets and superstores;
- taped cases for the furniture and white goods industry;
- heavy duty cases in CA flute for automotive and engineering components;
- large glued cases for bulk shipment of food.



The BGM 16/45 Container Line is equipped with two flexo print units.

Materials Handling

Investment in materials handling focused on storage and delivery of sheet board from the corrugator to the new BGM jumbo converting line, and automation of the finished goods area in preparation for the increased capacity. Dücker Fordertechnik's Stabil Track plastic belt conveyor is utilised extensively throughout.

The new BGM line is the largest converting machine in the plant and consequently the existing transfer cars were not adequate to transport the maximum size sheet from the corrugator to the converting line. Rather than completely replace the existing transfer car with a new one, Dücker were able to

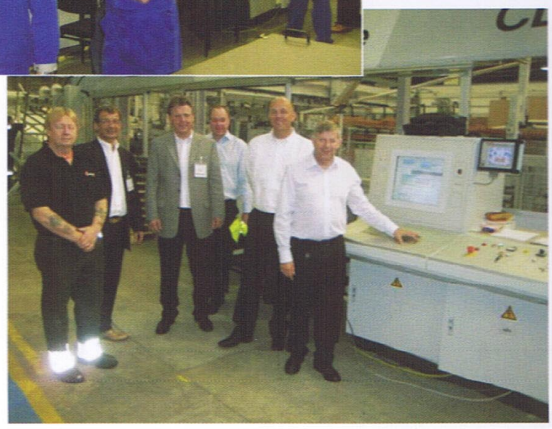
extend the existing framework and assemble new Stabil Track conveyor beds onto the existing car.

Intermediate storage lanes for sheet board up to 4500mm wide were necessary. The storage lanes also needed to be capable of handling the weight of the heavy grade doublewall sheet that is produced. The new lanes are fully accumulating to maximise floor space utilisation and can be operated individually or paired — depending on the sheet size and format.

A new automatic transfer car was required to handle the increase in finished goods capacity. The standard car operates with laser positioning and optical communication systems to ensure reliability. Load building at the BGM discharge enables double loading of the transfer car to reduce car loading cycles and an additional buffer between the transfer car and the palletising area has been added to handle the peaks in production output. Bottom edge protection pads can be inserted under selected stacks. This is usually a requirement for non converted sheet board that is shipped from the plant.

The old manual palletising system was replaced by Dücker's H2 automatic pallet inserter, which is newly designed with all electric control (no hydraulics) for improved speed and reliability. The pallet inserter is capable of handling large single stacks up to 3.6m long or two smaller stacks at the same time. Pallets are selected and delivered to the inserter automatically with a pallet robot. The complete finished goods system automation is driven by Dücker's modular ASCOR PC system. The system identifies stacks and co-ordinates pallet selection, strapping and stretch wrapping requirements.

Mr Mabbutt concludes, "At Mondi Packaging Bux we have made the largest investment in new equipment for over 10 years. It shows our continuous commitment in growing and developing the site as a specialist producer of large boxes."



Melvyn Mabbutt (bottom, right) with management and production teams.