

HOMAG Holzbearbeitungssysteme GmbH at the Ligna 2011

We are out in front! HOMAG – trendsetting technology whether in windows or edges

No gain without pain has been the motto adopted by HOMAG over recent months: every one of the company's divisions has been working at full steam on a range of innovations, new developments and technical highlights. Those aspiring to be abreast of the latest trends in batch size one throughfeed technology will welcome the new K 350 series, designed primarily for application at the entry level. In the field of stationary technology, HOMAG will be unveiling the powerProfiler BMB 900 for high-performance processing in the field of window and facade construction. In yet another tour de force, HOMAG is also set to impress Ligna visitors with a new automated cell for complete door processing.

THROUGHFEED TECHNOLOGY

K 350 series – entry into a whole new world of flexible production

One of the highlights at this year's Ligna will be the K 350 series, designed to open up flexible production right down to batch size one, primarily with the entry level users in mind. An outstanding workpiece transport system engineered for optimum running noise and workpiece guidance ensures the best possible standard of processing quality. The series combines all the important features of the high-tech machine series and is ideally suited as stepping stone into the world of flexible production. Just like its bigger sister, the K 600 series, the K 350 series comes complete with a rolling block link chain designed to minimize chain running noise. An additional polygon compensation function reinforces the effect of the smooth running chain, substantially reducing wear. The machines of the K 350 series are also fitted with workpiece guides which guarantee precise dimensional and angular positioning. Scope for free

equipment with processing units and a durable, torsion-resistant machine frame offer a range of additional benefits. Workpieces are transported with pinpoint precision and absolute dimensional and repeat accuracy. The improved chip and waste piece disposal facility in the sizing section makes for improved machine availability and a longer service life.

KFL 520 combination machine

The KFL 520 combination machine sets the performance standard in edge processing, with feed rates of 50 m/min for longitudinal and 30 m/min for transverse processing. With these performance levels, HOMAG covers every conceivable series production requirement, as well as demonstrating exemplary energy efficiency, with energy cost cuttings of up to 30% possible in series operation.

EVERYTHING REVOLVES AROUND THE EDGE

KBE 100 – edge pre-coating the easy way

Producers with ambitions to get involved in edge pre-coating will appreciate the benefits of the new HOMAG KBE 100. This machine ideally prepares edging material for subsequent processing using the **laser**Tec process, coating conventional edges using a specially developed function layer. This allows even thin edging materials to be prepared for processing with **laser**Tec. The machine is ideal for use in the entry level range for edging quantities of up to 2000 metres, as the availability of laser edges is not yet extensively guaranteed throughout the world market.

And in the field of edging materials for processing, HOMAG provides still further backing for its claim to technological leadership in the woodworking industry. Practically all materials can now be processed with zero joints for an outstanding joint quality. This innovation lends every workpiece the same exemplary standard of edge quality: No matter what the edging material used, HOMAG offers perfect quality across the board for its customers.

AMBITION – edge banding machines for woodworking shops and industry

The AMBITION series edge banders from HOMAG and BRANDT have become a firmly established feature in the marketplace. Offering a complete portfolio from the smallest through to the high-tech, ultra-flexible fully automatic resetting edge banding machine, this is a series which links the entire spectrum of users from the woodworking shop through to the industrial mass producer. No matter what the application, AMBITION has the perfect individual solution to offer at an affordable price. Processing units from the industry sector provide the guarantee of a long service life coupled with a consistent and reproducible standard of quality. Whether a short heating-up time or a high melting output are required, HOMAG and BRANDT have just the right gluing unit for every need. The PC22 **powerControl** system permits user-oriented, graphically supported touchscreen machine operation.

RANDOM LENGTH

Working in association with TORWEGGE a jointly developed double-end tenoner line with the name RANDOM LENGTH has been produced for the transverse processing of multiple layer parquet. In a similar way to solid parquet, this machine concept allows all the workpieces to have random different lengths. This development allows even small-scale suppliers to cost-effectively produce multiple-layer parquet with click profiles and random lengths while ensuring optimum material utilization. The machine was developed on the basis of the 260 series, and so closes a still remaining gap in the broad HOMAG Group double-end tenoner range. The plant is capable of processing up to 100 workpieces per minute using up to 8 motor units. Because of the single-sided concept with integrated offsetting station, no losses whatever are incurred during resetting when changing between dimensions.

STATIONARY TECHNOLOGY

BMG 600 gantry processing centre

The BMG 600 moving gantry processing centre follows in the footsteps of its predecessor, the highly successful BMG 500. The BMG 600 is capable of heavy-duty 5-axis processing operations up to 500 mm in height (including clamps). The main fields of application for the BMG 600 include vehicle and staircase construction, model building and shopfitting, as well as the processing of plastic and composite materials. This machine also benefits from the patented mineral material SORB TECH[®], whose high mass and optimum vibration absorption properties make for excellent processing quality and tool service life increases of up to 20 per cent. Instead of using tread mats and light barriers, the patent-registered safety system **safeScan** provides a no-contact safety guard of the work area. The benefit of this system: if a machine operator approaches the safety area, first of all the feed rate is reduced and the employee is given a warning. The machine is not actually blocked until the safety area itself has been penetrated. During alternating processing, the operator is able to make a dynamic selection of the work area, and the floor directly in front of the machine is freely accessible. Providing an ideal complement to this safety feature, particularly for 5-axis processing operations, is the software module **collisionControl**. This monitors the processing operation online and helps prevent machine damage resulting from collisions caused by programming errors.

powerProfiler BMB 900 – a whole new class in window processing

One of the major highlights in the field of stationary technology this year is the new **powerProfiler BMB 900**, a true multitalent that comes equipped with up to 432 tools. The challenge to produce "100 windows a day" was what prompted HOMAG to launch the development of automated processing centres capable of executing the whole range of tasks required for complete individual part processing in CNC precision – in other words the achievement of a degree of

ready-to-assemble fitting accuracy requiring no finishing or reworking processes. This applies not only to standard window components, but also for the exceptionally small cross-sections and short lengths required for restoration projects, as well as for sash bars, large cross-sections and long components for upright and transom constructs. The spectrum even includes the production of round arch components and front door panels. Flexible product design using five-axis technology and automatic workpiece handling leave plenty of space for additional processing scope. All the processing centres are designed to allow integration in existing product lines and link-up to trade-specific software.

Cell with robot feed facility for door processing

Automation made easy: The example of a customer plant for unmanned processing of door leaves demonstrates the benefits of intelligent automation for a 5-axis CNC processing centre. Feed, stacking and flipping with a high degree of freedom and fast changeover times are linked to the flexibility of complete CNC processing. But efficient operation using this type of system is unthinkable without a cell control system to coordinate the various processing possibilities. To address this need, HOMAG is now offering a simple new intuitively operated user interface for visualization and control.

SOFTWARE

Extreme programming simplicity with woodWOP 6.0

wood**WOP** 6.0, the latest generation of the **W**orkshop-**O**riented **P**rogramming system installed already in over 25,000 HOMAG Group applications, makes for significantly simplified CNC programming. Visitors to the Ligna stand will have the opportunity to experience this first hand with a series of live demos. The new three-dimensional workpiece view provides greater safety and clarity in the production engineering process, as all the processing operations are graphically displayed. The help function integrated in the user interface provides an illustrative graphic for each parameter and supports the daily work of the programmer. The free adjustability of window sizes and information boxes which can be hidden or shown as required permits programmers to configure the interface to suit their specific requirements. An update is also available for existing users.



Fig. 1:
HOMAG K350 with gluing unit



Fig. 2:
Processing a push car with the DRIVE5+ five-axis spindle



Fig. 3:
Complete HOMAG powerProfiler BMB 900 plant



Fig. 4:
Detailed view of door processing

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