

# inspiration

YOUR SOLUTION FOR WOOD PROCESSING

MAY 2017

Meeting your customer needs  
 Managing your complexity  
 Increasing your productivity  
 We are **YOUR SOLUTION**



YOUR FREE TICKET & ALL THE  
 INFORMATION ABOUT OUR  
 HIGHLIGHTS: [www.homag.com](http://www.homag.com)  
**LIGNA HALL 14**

Your customers demand greater individuality. They are looking to achieve greater productivity. With HOMAG you benefit from a partner which combines both. We will work jointly to create **YOUR SOLUTION** – no matter whether you produce complex one-off pieces or 1,000 individual kitchens a day.

## HOMAG AT THE LIGNA

### **YOUR SOLUTION** over 5,000 sq.m.

We provide support for woodworking companies of every scale on their way into the future. We will be demonstrating just how this is done at the LIGNA: With machines and technologies which grow with your business – and which will allow you to address individual customer needs, deal with challenging products and process a wide range of materials. We will be exhibiting custom-tailored machines across all performance categories which are ready for Industry 4.0. Using smart technologies and processes capable of communicating with each other. And with seamless software from the Online Shop through complete processing lines to packaging. If you produce furniture, structural elements or flooring then you'll find the right solution for your needs in **Hall 14**. Joineries will find the timber construction solutions they are looking for in **Hall 13**.

**Find out in Hanover the difference HOMAG can make to your business.**

### **WORLD INNOVATIONS AT THE LIGNA 2017**

- Industry 4.0: Digital solutions for practical application
- New HOMAG software platform
- New batch size 1 concept: Completely networked and faster
- Smart solutions for woodworking shops
- New zero joint technology
- An explosion of innovations: CNC processing
- Robots & automation reloaded
- New perspectives: Human-machine interaction
- New product portfolio: Complete surface processing
- Future technology in the InnovationCenter

**ONE HOMAG BRAND – ONE HALL 14 – 50 MACHINES**  
 We are **YOUR SOLUTION**



MAKING THE JOURNEY TOGETHER

## YOUR SOLUTION for the digital world.

The demand for individual products at attractive prices continues to shape the furniture industry. Your success in achieving this aim hinges on having the right partner behind you. A **partner who listens, who thinks in terms of solutions** and who can offer outstanding advice and expertise. We aspire to offer you precisely that: Let us join you on the journey into a successful future and provide you with the right answers in the face of growing competitive pressure.

Many of our customers have already set exciting new standards in **"Networked Production"**. The next challenge is to move a step closer to the **"Factory of the Future"** and the **"Industry 4.0 Vision"**. Achieving this will enable the production of the future to respond flexibly to market changes or customer demands – in constant dialog with suppliers, partners, sales teams and customers. How can your company improve the energy and resource efficiency of its production? Where are raw materials favorably priced and where can supply bottlenecks be predicted? At the same time, products continue to be optimized and adjusted to requirements. A **permanent exchange of data** will turn production into a **continuously improving process** in which products, machines

and resources control each other. For this to happen, **standardized interfaces and standards** are vital for data exchange. **Take a look at how smart your production can become starting from May 2017 at the LIGNA.**



SMART SOLUTIONS

## Leading in production efficiency.

Digitalized production has made its entry into our industry a long time ago. We are continuously developing new digitalization solutions – always with the aim of making your production more efficient and offering you new optimization potential.

<p><b>SMART FACTORIES</b></p> <p>"Smart products" allow end customers to configure their kitchens individually, for instance. Just a few days later, their kitchen can be delivered ready to install. This is achieved using software at whose core is an <b>MES for production control</b> (page 8).</p>	<p><b>SMART PRODUCTS</b></p> <p>Working with the smart factory, the organization of production plants and logistics/transport systems is growing increasingly autonomous. Smart machines <b>support the operator</b> performing daily tasks. With additional <b>production optimization</b>, operating times can be organized more flexibly and efficiently.</p>	<p><b>SMART SERVICES</b></p> <p>With smart solutions, we can help you enhance your plant availability. Machines are serviced using <b>predictive maintenance</b>. If an error occurs, remotely located servicing experts can offer support. As a result, today 90 % of service issues are resolved online.</p>
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INNOVATIONCENTER – THE ORIGINAL

## Technology of tomorrow.

At the heart of our trade fair booth, we will be setting aside a more significant area than ever before to innovations of the future. Inside the InnovationCenter, discover **new patent-registered technologies** and **smart Industry 4.0 applications** to provide inspiration for the future of furniture component production. Take a look at technologies which are set to influence trends in the furniture industry in the years to come. Marking the end of the tour is a visual surprise – a **180° degree cinema** to provide an insightful glimpse at the furniture production of tomorrow.



ONE PLATFORM FOR INTEGRATED SOLUTIONS

## New HOMAG software platform.

**WORLD PREMIERE: We have completely revised our software product portfolio to benefit our customers.** For the first time at the LIGNA, find out how we configure individual solutions for woodworking shops and industrial producers from our modular suite – "One Platform for Integrated Solutions". The focus here is on **end-to-end solutions from sales through to furniture completion.**

**MANAGING!**

For catalog-oriented manufacturers (kitchen, office, living room and bathroom furniture), the "Configurator3D" forms the nerve center of graphic order acquisition. This **3D product configurator** is used to configure and process highly individual furniture orders in just seconds – in an unlimited choice of variants. The automatic generation of production data means that complexity remains manageable at all times.

**CREATING!**

There are now no limits to creativity at the point of sale. With the furniture design software "Designer3D" and the Internet configurator "DesignerWEB", we offer **software solutions for every sales channel** – dealers, direct sales and web shops.

Comprehensive libraries of decor articles and electrical appliances allow you to plan complete furnishing scenarios and then present them using **virtual reality apps** (such as Google Cardboard) to create a truly graphic customer experience. "Designer3D" uses the data from the "Configurator3D" – allowing all plans to be adopted directly by the production system.

**PRODUCING!**

Perfect, efficient organization and absolute **production process transparency** are achieved using the new manufacturing execution system **"ControllerMES"**. Adjusted to your production system, the

software provides support in the precise planning and monitoring of your production and in **organizing information flows**. The cutting optimization software Cut Rite runs on a fully integrated basis. Digital information is made available to production at all times to aid the simplification of manual work steps. The add-on software **MMR Office (Machine Monitoring & Reporting)** ensures machine status transparency and permits continuous process optimization.



NETWORKED PRODUCTION: WE FUTURE-PROOF PRODUCTION PROCESSES

## Batch size 1 plant: Completely networked.

A batch size 1 plant will be live in action at the LIGNA demonstrating impressive data continuity and technical solutions for individual component production. The components of this high-tech furniture plant are completely networked, demonstrating a solution for the production of individual, high-grade furniture of exemplary quality both today and in the future.

- **Cardboard cutting machine VKS 250.** This machine produces required packaging just-in-time in batch size 1 – tailored precisely to fit and at minimal piece costs.

- **Horizontal storage system TLF 411.** The storage system and suction traverse ST 71 demonstrate outstanding scope for transporting wide-ranging materials.
- **Cutting cell HPS 320 flexTec.** This robot cell has been extended to include various stacking facilities (page 5).
- **Edge processing with Profi KAL 610.** The tandem plant comprising two edge banders comes with an unprecedented circulation system (page 6).
- **Order picking center TLB 321.** The TLB buffers, sorts and picks the material flow over the entire process chain (page 5).
- **Drilling and hardware fitting technology with the ABF 600.** The CNC-controlled machine processes sensitive fronts gently and efficiently.
- **Electrical throughfeed case clamp MDE 120.** Technology permitting the automatic, careful clamping of any box to a high standard of quality. It copes equally with sensitive, ultra high-quality or mitred carcasses.

**+ MACHINE OPERATION WITH POWERTOUCH**

All machines of the batch size 1 plant feature standardized operating elements and software modules, ensuring a familiar look and feel which is: Simple, standardized, ergonomic.

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**+ CELL CONTROL SYSTEM WOODFLEX**

This control system takes charge of networking all the machines of the batch size 1 plant. It has a modular structure and is open for future requirements and upgrades. woodFlex creates security, optimizes sequences and enhances efficiency. woodFlex represents another major step towards "Industry 4.0".



**IN FOCUS: WOODWORKING SHOPS**

## Workshop concepts from small to large.

Woodworking shop visitors will find smart workshop concepts for entry level businesses through to industrial-scale networked workshops. Together, the machines form smart solutions, while the stand-alone machines also feature innovative technical highlights.

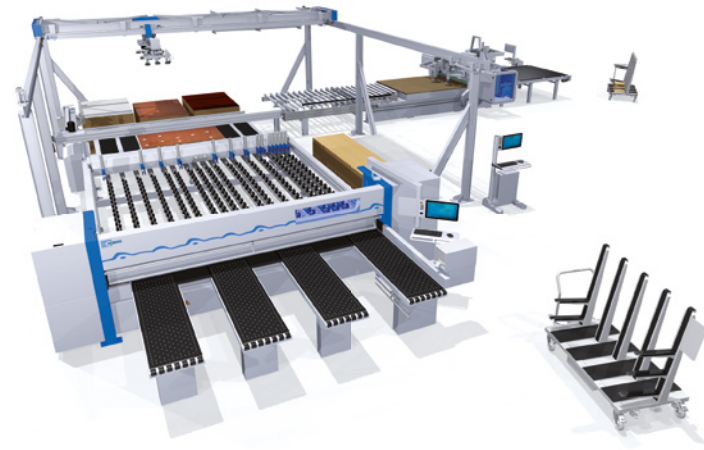
**Small entry-level workshop over 80 sq.m.:**

Here, an edge bander from the Ambition series provides an optimum solution for entry into the world of zero joint technology. The machine is fitted with the airTec unit and new PU gluing technology. This edging talent is supplemented by a panel dividing saw with "module45" for miter cuts directly at the saw, a machine for entry into case clamp technology and a CNC processing center for vertical drilling operations.

**Workshop for the industrial entry level:**

Here, a sawing-storage-nesting cell is fully networked with a drilling and dowel insertion machine with end-to-end data flow. Both the panel dividing saw and the nesting machine feature technical

highlights – such as the new operator wizard system "intelliGuide" on the saw or the nesting process with "register mark recognition".



**NEW SOLUTIONS FOR WOODWORKING SHOPS**

## A Built-in wardrobe yesterday, a hotel room today, a well-prepared tomorrow.

The diversity of panel and edging types is constantly on the increase – as is **demand for individual and unusual furniture**. To meet this demand, joiners and cabinetmakers need maximum machine flexibility. To provide this, we **adapt solutions from industry for woodworking shops** and innovate existing woodworking shop technologies to meet future challenges.

One example will be on show to LIGNA visitors in the field of panel dividing technology. The "module45" unveiled in the fall of 2016 will be at work on the smallest saw. This enables **precision miter cuts straight off the saw**.

HOMAG will also be presenting a vision for the future of **ergonomic machine operation** for edging machines at the LIGNA with its **wireless hand-held operator terminal** used for running in operation or in shut-down situations. In the past, trailing cables could pose a trip hazard. When working with long machines, dragging a cable up and down the length of the machine during operation can be inconvenient. Users can now dispense all of that.



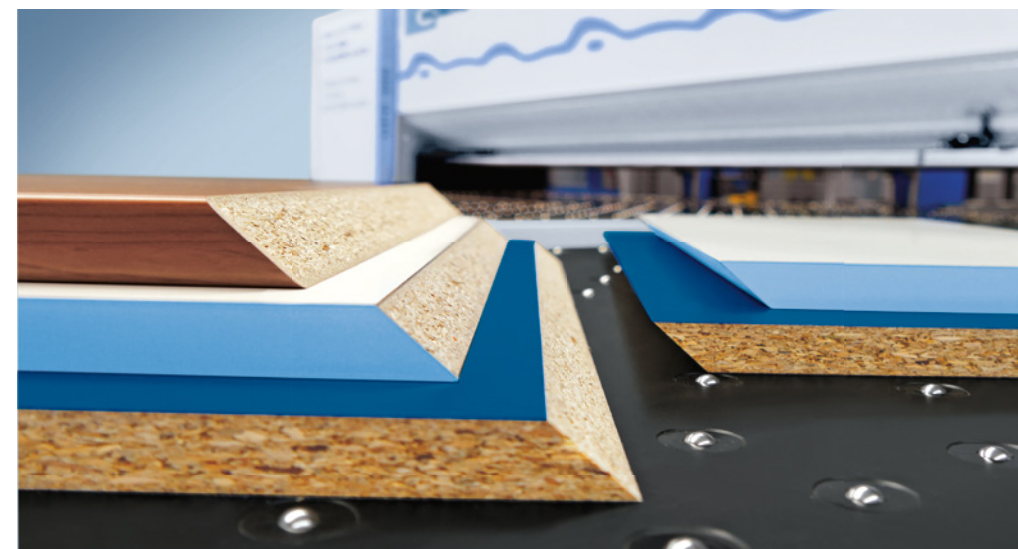
The Ambition 1120 FC enables complete workpiece processing

To address the **growing demands made on edging quality even at the entry level**, the Ambition 1120 FC is the perfect solution. A jointing-trimming unit for the preparation of workpiece edges and a profile trimming tool for corner rounding permit complete workpiece processing. Two empty spaces offer wide scope for equipment in the finishing section. Another highlight: The **airTec method for the manufacture of optical zero joints** can be used from the Ambition 1200 series upwards (page 6). Visitors to the LIGNA will also be able to view two additional developments for even more flexible **edge processing**:

- **The profile trimming tool becomes a multiple-stage unit:** A new tool permits **simple changeover between two profiles** or radii. The multiple step

method is optionally available on the 2-motor multifunction profile trimming tools.

- **PU processing from the entry-level machines upwards:** To allow the manufacture of furniture with maximum resistance to water and heat, many companies rely on the processing of PU adhesive. A standardized, top-mounted glue application system for entry-level edge banders will be available from the LIGNA onwards. This will allow the processing of all **glue types including PU adhesive**. A standardized interface enables simple changeover of application units. The result: Users gain flexibility, save changeover time and money, as there is no need to purchase a dedicated exchange tank.

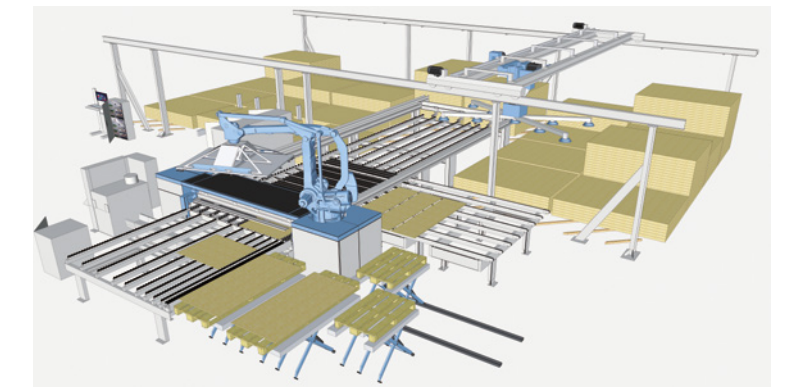


Miter cuts can now be dealt with while still on the saw

**ROBOTS RELOADED: CUTTING CELL**

## HPS 320 flexTec: Now with fully automatic part destacking.

The HPS 320 flexTec was THE sawing surprise at the LIGNA 2015, and has since revolutionized batch size 1 production. The robot cell has now been upgraded to include **a range of destacking possibilities in the action radius of the robot**. In future, the choice is yours: Either the robot deposits parts on an outfeed roller conveyor or it will destack fully automatically onto lift tables. A combination of both variants is also possible. This permits completely unmanned operation over long distances – using a non-networked HPS 320 flexTec. This is made possible first and foremost by an ingenious software algorithm.



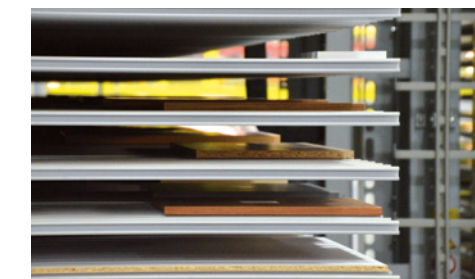
**AUTOMATION**

### Order picking center TLB 321.

Even the traversing carriage of the TLB with its **array of variants** for workpiece arrangement sets a whole new standard among order picking devices. It offers extreme application versatility. The TLB 321 buffers, sorts and picks the material flow over the customer's entire process chain.

**THE BENEFITS:**

1. Enhanced servicing convenience and extended maintenance intervals
2. Efficiency increase in management of high rack
3. Extended flexibility due to free determination of material flow strategies



### STORE CONTROL SYSTEM WOODSTORE 7.

woodStore is the **brain of every HOMAG storage system**. The latest version woodStore 7 offers improvements particularly in terms of user convenience, safety and process optimization. The new tools now offer added material management optimization potential across the entire storage-processing machine system, while enhancing user safety.

**OPERATOR ASSISTANCE SYSTEM**

### Highly innovative saw navigation: intelliGuide.

This complete solution for operation was unveiled as a concept study back in 2015. Its name: intelliGuide. The basic version has been known since the fall of 2016 as **"Operator Assistance System LED"** and indicates the next processing step with the aid of an LED strip directly along the cutting line. Additional upgrade stages have been added to the "intelliGuide basic": "intelliGuide advanced" and "intelliGuide professional". Both versions use a **camera system with image processing software**. This lends the intelliGuide its own "eyes". As a result, for the first time the machine responds to actions by the operator. The "intelliGuide professional" also features an integrated

**laser projection system** which makes the solution even more ergonomic.

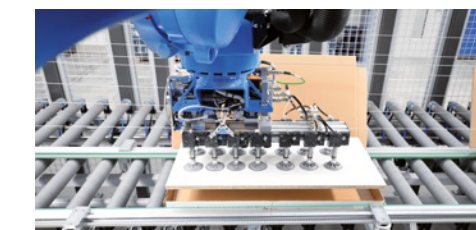


Human-machine interaction: The saw responds to actions by the operator.

**AUTOMATION**

### Robot insertion station VRE 200.

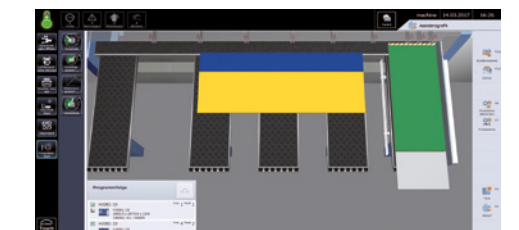
Fully automatic insertion of workpieces in cardboard boxes – not a problem with the pitless robot insertion station VRE 200, because practically everything can be automated. The robot as the central element of insertion station VRE 200 delivers practically 100% availability and almost identical repeat accuracy. The **insertion station works fully automatically** and adjusts ideally to the speed at which the boxes pass by the robot's insertion area.



**SOFTWARE - NEW GENERATION**

### Saw operation: CADmatic 5.

Simple, efficient, intelligent: The saw control system CADmatic 5 makes cutting simpler than ever. For all saws from series 3 upwards. The highlight: An **innovative assistance graphic** guides the operator visually through all the input and processing steps at the monitor. A **color-coded guidance system provides added orientation**. Users navigate and complete most entries intuitively – with touch and swipe movements at the monitor: Simple, self-explanatory and ergonomic.





COMPACT PU EDGE PROCESSING IN BATCH SIZE 1

## Tandem plant for edge banding.

The new plant concept for flexible production of kitchen elements comprises two K 610 edge banders. The core is formed by two power jointing-trimming units mounted one behind the other. These are equipped with hydro tools for splinter-free workpiece preparation. The gluing section is capable of processing 48 different edging types in automatic alternation without manual intervention. All edges are glued using PU to ensure optimum fulfillment of the special demands made on kitchens in terms of humidity and heat resistance. Grooves can be produced in any individual width, depth and position. The plant is configured for 5,000 parts with edge processing in two shifts. An **offsetting station with unprecedented**

**workpiece circulation** substantially reduces the space required compared to previous concepts.



After the LIGNA, the cell will be producing batch size 1 kitchens on the premises of one of our customers. Photo: SACHSENKÜCHEN

### LET US SIMULATE YOUR PRODUCTION LIVE AT THE FAIR

How efficiently would this edging cell work in your production? Simply send us your production data. With a 3D tour and live material flow simulation at the LIGNA, let us show you the output you could achieve with your product spectrum using our plant concept. Interested? Get in touch with us at: [simulation@homag.com](mailto:simulation@homag.com)

WORLD PREMIERE FOR OPTICAL ZERO JOINT MANUFACTURE

## laserTec\* – Next Generation. The update of the proven HOMAG laser system.

Our zero joint experts have now used the **experience gathered from over 200 supplied laserTec systems and taken the technique** a step further. The result: the "laserTec – Next Generation", which will be series produced from the LIGNA 2017 onwards.

The update of the laser system is a reliable partner both for batch size 1 and series production.

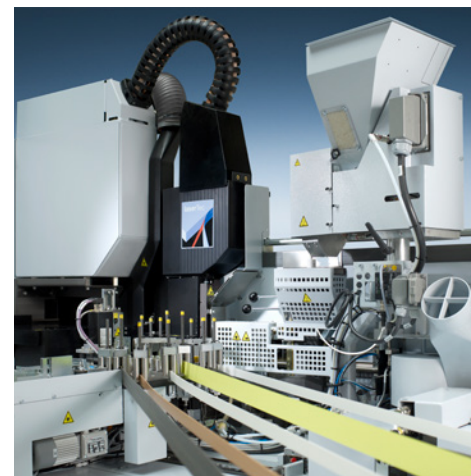
The unit is available to two performance categories (max. 60 m/min with workpiece thickness 19 mm). Its simple control system makes for optimum system reliability, as well as outstanding maintenance and servicing convenience.

**THE BENEFITS:**

1. Performance optimization with the new diode technology
2. Simple structure for a smaller, more robust design

\* For patent-related reasons this may only be used in Germany with Rehau edges.

3. Extended service life and less maintenance work due to new cooling concept
4. Reduced set-up time and less space at the machine
5. Optimized beam profile at the edge and less susceptibility to faults



The update of the proven HOMAG laser reflects experience gathered from over 200 completed applications

SURFACE COATING

## We now offer coating too.

With wet coating, we are now offering a new product for the surface coating of furniture. Specifically for small to medium-sized operations looking to enter into the field of spray coating, we will be showcasing the ideal solution at the LIGNA – in close cooperation with a leading spray lacquering firm. Alongside improved end product quality, the system also offers simplified part handling and small batch size processing.



### NEW PRODUCT PORTFOLIO for surfaces: coating, laminating, sanding.

ZERO JOINT FOR WOODWORKING SHOPS

## airTec – more powerful and quieter.

Since the fall of 2016, our new airTec process has been the ideal **entry-level solution to the world of zero joint technology**. This is significantly more efficient and available for edge banders with feed rates of 8 to 25 m/min. The method can be used from the simplest entry-level machines of the Ambition series through to the high-end machines of the KAL 370 series.

**THE BENEFITS:**

1. Reduced noise
2. More efficient, resource-saving operation
3. Even air flow for high quality
4. Simple operation with powerTouch
5. Energy requirement reduced by 10-30 %



The new airTec unit for woodworking shops

NEW NESTING TECHNOLOGY

## Self-expression with furniture fronts: New method.

**The trend for the customization of furniture is continuously on the increase.** Designs implemented in the past using extravagant shapes and colors have now been extended to custom printed furniture fronts. This is where furniture manufacturers face a challenge: How to cut customized front designs so that the panels match perfectly later on? The solution: A new automated nesting method with register mark recognition. This uses so-called register marks on the decor. These are evaluated by a camera. The component to be processed is referenced in the panel and cut precisely to match.



Nesting on the BHP 210 enables the production of unique "one-offs".

NEW COMPONENTS, NEW OPERATION

## New series BMG 310.

**Freely accessible, more space for tools.** When developing the new BMG series, our CNC experts followed the adage "Keep what works – and add to it".

**The table is accessible from 3 sides:** Users have easy access to the machine. Large parts can overhang in some cases. The all-round enclosed housing allows the machine to be flexibly integrated with additional protection measures.

**Plenty of space for tools:** The new tool changer is able to quickly access tools and is fitted with an outer (24 slot) and inner (8 slot) ring.

**Order in the machine bed:** The consoles are supplied by concealed trailing cables. This ensures that waste pieces cannot become jammed and prevents damage to the hoses.

**The new machine operating panel powerTouch PC87:** The machine bed, consoles, clamping elements and workpiece including all processing operations are depicted as freely rotatable 3D models. Positioning uses drag&drop – with space-dependent calculation of all necessary clamping elements.

### SOLID WOOD PROCESSING: NEW SOLUTIONS

In our structural element area, alongside the proven powerProfiler we will be showing a new top-quality solution to complete the window processing process chain. Come and be surprised!



The machines of the series offer outstanding potential to become the hinge pin of your production

### VISIT US IN – HALL 13, BOOTH C18 + D18 – SOLUTIONS FOR HOUSE CONSTRUCTION FROM WEINMANN AND HOMAG

NEW: COBUS NCAD INTERFACE

## The high-efficiency saw HPP 300 multiTec.

The HPP 300 multiTec saws, drills and trims in a single pass. Now new: The saw comes with an interface to COBUS NCAD. This allows timber manufacturers and partition wall builders to work more flexibly and faster than ever before.

COBUS NCAD generates production data from CAD/CAM plans and transfers it to the Cut Rite optimization. From here, the data is sent directly to the saw. If several machines are in use, COBUS NCAD decides independently which component is produced on which machine.

WORLD PREMIERE IN AUTOMATED TIMBER FRAME CONSTRUCTION

## Multifunction bridge WMS 060.

Looking for an entry-level machine into CNC-controlled timber house construction? You will find just the solution you are looking for in the WMS 060

from WEINMANN. This Master Carpenter Bridge fixes and processes planking efficiently and to a high level of precision. Automatic production of door and window openings, recesses for sockets and much more – no matter whether a wall, roof, ceiling or gable: The WMS 060 can be used to produce any element. It also processes different structures and materials quickly and precisely. Ultra-modern CNC control ensures a high level of processing accuracy. The solution

requires just 90 sq.m. of space including work table – and all at an excellent cost-to-performance ratio.



WEINMANN and HOMAG will be demonstrating compact machines for timber construction live in action.



**“Digitalization is crucial to the modern furniture industry – and the solutions we will be showcasing at the LIGNA will provide the assurance of future-proof production for our customers.”**

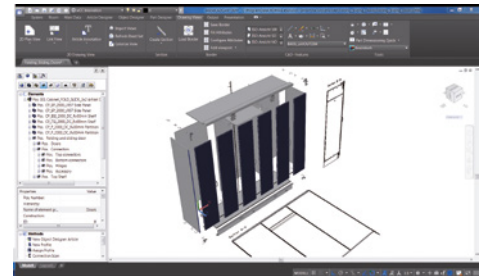
**Pekka Paasivaara,**  
CEO of HOMAG Group AG

**SOFTWARE SOLUTIONS**

**woodCAD|CAM 12.0 is coming with an array of new features.**

With a completely revised graphic user interface, the new version of woodCAD|CAM 12.0 offers far greater user convenience. With **simpler operation, rapid data generation and optimized handling of fittings**, you can look forward to vastly improved efficiency. Another highlight: Sales planning including photo-realistic views, sales and release documentation can now be more conveniently and rapidly created. Take the modeling function used particularly by interior fitters and property furnishers, for instance: this has been extended and the

issue of production documents has been optimized.



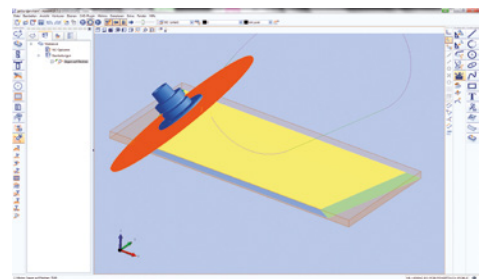
The trade-specific system for interior fittings and property furnishing is easier to operate

**SOFTWARE CNC**

**woodWOP 7.1: New functions for every field of application.**

The functional scope of this now fully valid CAD/CAM system has been further extended. **A wide range of upgrades, new processing macros and optimization of the user interface have simplified day-to-day working.** The new CAM plug-ins include “Sawing on surfaces”, for instance. Here, users can optionally have sawing cuts automatically generated, or determine

the sawing cut manually by selecting a surface and a guide curve. The “borehole recognition” feature allows woodWOP 7.1 to automatically detect the boreholes and cylindrically shaped pockets contained in the 3D CAD data and directly derive the relevant processing macros.



Generation of miter cuts in the automatic mode

**SOFTWARE SOLUTIONS**

**Transparent organization of production processes: Manufacturing execution system “ControllerMES”.**

**Successful networking calls for a matured, solid software basis.**

With the new MES platform, users are ideally placed for the future thanks to modern software architecture. The new manufacturing execution system is based on the established powerTouch operating technology and encompasses everything from

- ... production planning with optimum production batches
- ... through the provision and generation of production data for machines (sizing, edging, CNC...)
- ... to completed notification after final assembly.

Relying on “ControllerMES” means significantly increasing

- ... transparency, efficiency and control
- ... and supporting the optimization of production processes.

The software enables the perfect interaction of HOMAG machines in networked production. “ControllerMES” was designed by our developers as a flexible standard software. It is up to 100 %

updatable, scalable and offers the right solution both for woodworking shops and industrial enterprises.

