Dr. Harnisch Publications

ISSN 1438-1672 · Vol. 41 · No. **1/23** · **March**

WiN woodworking INTERNATIONAL

LIGNA PREVIEW · MACHINING TECHNOLOGY · TOOLS · SURFACES · SUSTAINABILITY

Digital as usual.

Digital as usual.

Looking for the latest topics from the woodworking industry?

You're at the right place!

Click here to register for our Newsletter free of charge and subscribe to our digital ePaper editions.

BE A WiN NER!

WiN - woodworking INTERNATIONAL

Advertising contact: win@harnisch.com

The magazine is published in a special format : 229 mm x 305 mm.

We report on all aspects of woodworking from board materials, wood treatment to machines, tools and technical know-how, from timber engineering supplies to the latest developments in technologies and markets.

Special features will be presented on design, surfaces, laminating and furniture.

Eric Schäfer

Editor

Yes, it feels like Christmas again!

German soccer star Franz Beckenbauer once asked if it's Christmas already with a wink in a now cult commercial. Of course, it's not Christmas again. But there is no lack of anticipation at the moment. Namely, the entire industry's unbridled anticipation of LIGNA 2023, which will finally be held in Hannover again after four years. Exhibitors from all over the world, most of them from Germany, Italy, Austria, Turkey, Spain, China, Sweden, Slovenia, Denmark and the Netherlands, will finally be able to present their new products for visitors to touch.

Visitors can look forward to a unique overview of the entire value chain of the woodworking and processing industry. Because, as Dr. Jochen Köckler, CEO of Deutsche Messe AG points out: the LIGNA "is THE international showcase for innovations and THE stage for world firsts." In this issue of WiN, we lift the curtain a little and give a first glimpse of what the major exhibitors will be showing visitors at LIGNA.

In addition to the trends in digitization and automation, the showcase will also feature many innovations relating to prefabrication in wood construction. The latter is a trend that not only places new demands on technology and plants, but is also defining in terms of sustainability.

From timber construction it is only a small step to flooring. Together with Hymmen, we look back on the success story of digital printing at flooring manufacturer Classen in a user report that is well worth reading.

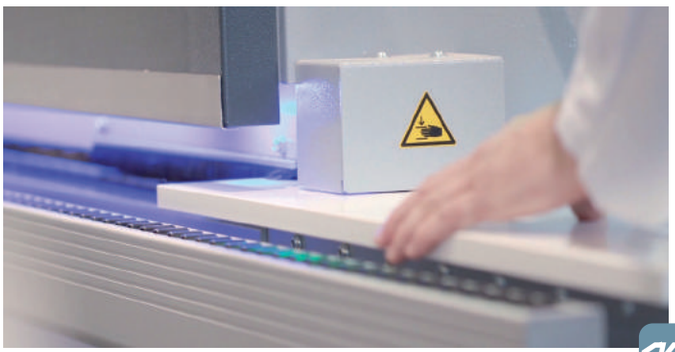
Sincerely,

Eric Schäfer

Cover Photo: Biesse

Hymmen 12

Leuco 13

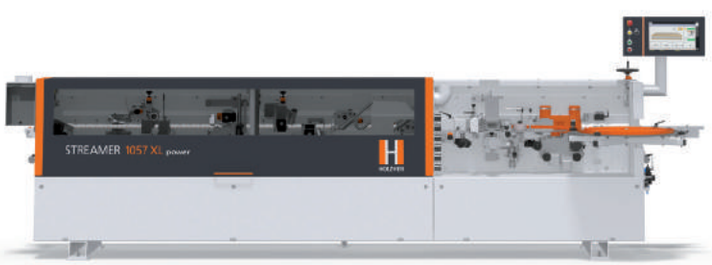


Jowat 14

Homag 11

Biesse 12

Cefla 15



Weinig 15

Dr. Harnisch Publications

Impressum

ISSN 1438-1672

WiN - woodworking INTERNATIONAL
Vol. 41/2022

Dr. Harnisch Publications
Eschenstr. 25, 90441 Nuremberg, Germany
+49 - 911 - 2018 - 0
win@harnisch.com
www.woodworking-international.com

Owners: Dr. Claus-Jörg Harnisch
Benno Keller

Publisher: Benno Keller
keller@harnisch.com

Managing Editor: Marta Bletek-Gonzalez
gonzalez@harnisch.com

Editor: Eric Schäfer
eric.schaefer@harnisch.com

Media Service:

Germany, Austria, Switzerland
Dina Fettig dina.fettig@harnisch.com

Martin Fettig martin.fettig@harnisch.com

Western Europe
Gabriele Fahlbusch fahlbusch@harnisch.com

USA/Canada
Steve Max steve.max@harnisch.com

China, Hong Kong, Taiwan
Mike Hay mchhay@ringier.com.hk

Taiwan
Sydney Lai sydneylai@ringier.com.hk

WiN - woodworking INTERNATIONAL
is published quarterly
in March, May, August and November.

printed by
Schleunungdruck GmbH,
Eltertstraße 27, 97828 Marktheidenfeld

SAIB becomes part of the EGGER Group

EGGER acquires 60 % of the shares in Italian wood-based materials manufacturer SAIB. Acquisition agreement closed on December 15, 2022.

SAIB, based in Caorso, near Piacenza, has been one of the leading wood-based materials manufacturers in Italy for 60 years, with a strong focus on design and sustainability. For the plant with around 200 employees, the majority shareholding by EGGER opens up further growth and synergies in this globally active group of companies. With this investment, EGGER is confirming its strategy of further growth in its home market of Europe.

Two family businesses, founded almost at the same time, with common values regarding sustainable business and reliable partnerships: EGGER's investment in SAIB is an ideal match and offers great development potential for both companies. The EGGER Group will take over 60 % of the shares in SAIB. Additionally, in the long-term EGGER will potentially further increase the participation. The parties have agreed not to disclose the purchase price or further details of the transaction.

Joint growth opportunities

Thomas Leissing, Speaker of the EGGER Group Management, emphasises the synergies of the takeover: "Italy is one of the leading furniture producing countries in Europe, and SAIB is one of the leading suppliers for the Italian furniture industry. With the majority shareholding in SAIB, we are broadening our market access, increasing our capacity and expanding our product portfolio with Italian design expertise."

The members of the SAIB owner family Giuseppe Conti, Clara Conti and Sergio Doriguzzi will continue to manage the plant in Caorso. "The integration of our company into the international EGGER Group gives us a growth perspective for the Caorso production plant and our employees," Clara Conti explains the company's share sale.

"We will be able to benefit of the experience and the network of a leading Group that has always been focused on production improvement and product quality," say Sergio Doriguzzi and Giuseppe Conti. "Both companies are founded and developed by families and their common values, like attention to environmental sustainability and trust in their employees and workers. This represents a solid basis for building a common future characterized by continuity and innovation."

The experienced team of 223 people in Italy will provide significant support for this joint growth course and contribute its experience to the EGGER Group. In particular, the sustainable, circular production processes perfectly contribute to the sustainability goals of the EGGER Group. The plant has been using entirely post-consumer recycled wood in production since 1994.

www.egger.com

2022 absolutely positive and 2023 to be discovered

"A positive season that we expect to extend at least for the first part of 2023". Christian Salvador, owner with Ziemowit Dolkowski of Salvamac Group, comments on the results of the year just ended. "They have been twelve intense months, of great work and consolidation for a reality like ours, which has a history that is based on the experience and energy of people who have been working in this sector for decades.

An experience thanks to which we have achieved an excellent 2022 financial year, with a turnover that marked a growth of 27 percent compared to the previous year".

Among the elements that have allowed to archive an excellent 2022 is the confirmation of the appreciation by the markets all over the world of the machines designed and built by the Italian-Polish company, with surprising sales data in the world of windows and doors for the "Salvapush_200", a pusher optimizing saw that – thanks to the evolution in software and the ease of interconnection "Industry 4.0" – turns out to be a winning solution in small and medium-sized enterprises in the segment.

In more general terms, 2022 saw a greater predisposition of operators for the most advanced Salvamac solutions, automatic or semi-automatic, capable of integrating with management systems and making daily work easier thanks to label printing or barcode reading systems.

An important year also in terms of new products, starting with the presentation in October of the "Salvacut 5000", a new high-speed feed-through optimizing saw with electronic cutting that guarantees productivity up to 3,500 linear meters of profiles per hour, a concentrate of electronics and innovation that reaffirms the ease of use of all Salvamac solutions, even when it comes to record-breaking performances.

Salvamac has further strengthened its share in all the countries in which it is present, with a positive peak in northern Europe, in particular in Great Britain, Spain and Italy, the latter thanks to the support guaranteed to companies by the measures of the national government that has strongly influenced investment choices.

Now it is to look to 2023: great news will be announced in May, when the "WoodWe" project will be officially presented, through which Salvamac intends to renew its desire to give great answers to the needs of operators through a network of companies and a range of products that are a real solution.

www.salvamac.com

Shaping the change.

9–12 May 2023

in Cologne

interzum @home

Digital pre-show
2–8 May 2023

Digital live event
15–16 May 2023

Register now!
www.interzum.com

Koelnmesse GmbH, Messeplatz 1, 50679 Köln, Germany
Tel. +49 1806 077 050, interzum@visitor.koelnmesse.de

interzum

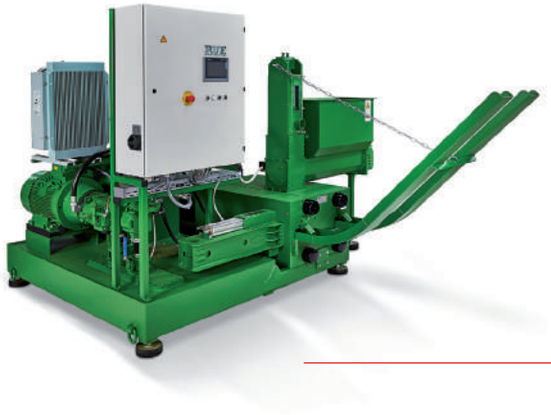
GO CREATE THE NEXT NORMAL

koelnmesse

RUF Maschinenbau posts record figures in 2022

In defiance of the economic crisis

For many companies, recent years have not been easy. And the manufacturer of briquetting systems RUF has had its fair share of COVID repercussions too, such as deferred investments and supply chain problems. The war in Ukraine then exacerbated in particular the shortage of steel and electronic componentry.



Notwithstanding, 2022 ultimately proved a record year for Ruf Maschinenbau, in terms of both briquetting system sales and turnover. Not only its head office in Zaisertshofen, Bavaria posted top figures. Its subsidiaries in the USA, Slovenia, the UK, and Denmark could also record highly encouraging turnover figures and are now well equipped with beefy incoming orders for 2023.

There are several reasons for this success. For instance, the boost to orders from the wood and energy sectors was fuelled primarily by sustainability issues and fossil energy savings. A growing number of timber processors are seeing in residual woods an invaluable raw material that can provide a profitable sideline.

Yet high incoming-order levels alone are no safeguard of high turnover: their fulfilment is far from easy owing to the lack of components and unpredictable material and energy prices. The proprietors and managing directors of the family-run Ruf Maschinenbau think over the medium and long term, as they have been doing since the very outset. This too represents a key success factor.

In other words: the generous stockpiling of semifinished products and other components can better compensate for supply and price fluctuations and maintain shipping capacities. And just as important: thanks to its large PV installations covering all buildings in Zaisertshofen, in combination with a CHP plant, the central RUF location is independent of fossil fuels.

www.brikettieren.de

Success for the "Thin Board Challenge"

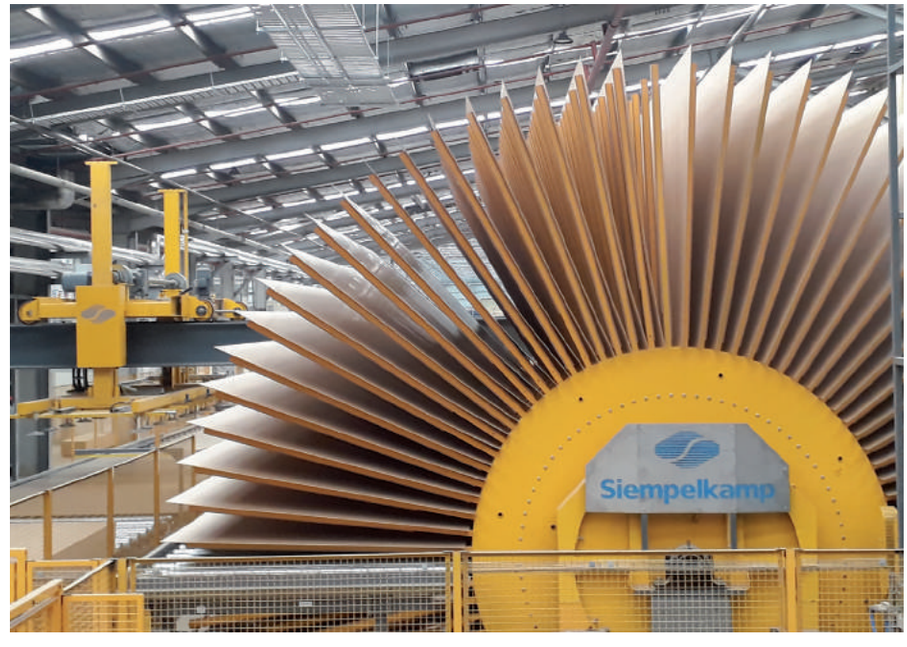
Acceptance at Borg

On October 12th it was "acceptance" for an MDF thin board line made by Siempelkamp operated by Borg Manufacturing Pty. Ltd. Thus, the fourth Siempelkamp production line in total at the Oberon, New South Wales, location was handed over to the Australian wood-based panel producer.

In 1987 and 1995 the first two MDF plants at the Oberon location had been ordered from Siempelkamp. In 2017 the order chronology was supplemented by a plant for the production of particleboard. The order for the currently accepted MDF thin board plant with a ContiRoll® in the 8' × 18.8 m format had been placed by Borg Manufacturing Pty. Ltd. in 2019 and thus now operates four Siempelkamp plants in Oberon.

The plant produces boards in a thickness range from 1 to 25 mm. In particular, the production of the 1 mm thin board represented a special challenge for the commissioning team.

"For us this is a special success, considering that, in addition to the technological challenge, the Corona entry restrictions also influenced the work of our project team. We are pleased that the work with our customer's team in particular could be conducted inx such a result-oriented and constructive manner regardless of this," says project manager Stefan Wolff.



Successful acceptance process: the finished Borg product

www.siempelkamp.com

DIEFFENBACHER to supply another Fine OSB plant to China

Chinese wood-based panel producer A Beautiful Family Plate Making Co. Ltd. (BFP) has contracted with German machine and plant manufacturer DIEFFENBACHER for a complete Fine OSB plant in Guangxi, China. Installation of BFP's new plant is scheduled for the second quarter of 2023. The first board is to be produced in fall 2023.

DIEFFENBACHER will supply everything from chip flaking to raw board handling. The contract includes the dryer, screens, particle preparation and material recovery, glue preparation and dosing, gluing system, forming station and forming line, CPS+ continuous press system and electrics and plant automation. The plant will be able to produce 500,000 m^3 of Fine OSB per year.

"Fine OSB is increasingly popular in China," said Matthias Rübsam, Area Sales Director at DIEFFENBACHER. "The lower cost of the raw material makes OSB an economical alternative to plywood for almost every application. Fine OSB, however, overcomes traditional OSB's poor laminating capability, caused by its uneven board surface." In Fine OSB, the OSB core layer is covered top and bottom by layers of particleboard to give a better structure to the top surface. This enables further processing, including laminating or coating on both sides with melamine or phenolic paper in a short-cycle press.

"Fine OSB combines the excellent mechanical properties of OSB, including moisture resistance, robustness, stable size and strong screw-holding force, but with the surface quality of particleboard," added Rübsam. "That makes it the perfect product for applications in home furnishings and decor, flooring, custom furniture making and many other areas. The Chinese authorities believe in the product so much that they've established a national standard for Fine OSB," he concluded.

www.dieffenbacher.de

Contract signing between BFP and DIEFFENBACHER. From left to right: Chen Yaoli (General Manager and Project Manager, BFP), Zhang Zhiyu (BFP), Zhang Linjun (Sales Manager, DIEFFENBACHER Beijing), Jin Guansen (President, BFP), Liu Shouhua (General Manager, DIEFFENBACHER Beijing), Wang Yong (BFP), Shen Jiaxiong (BFP).

High performance with a whisper

When cutting panels on table- and sizing saws, as well as panel saws, the topic of noise reduction becomes increasingly important. Leitz has developed the WhisperCut circular saw blade: user-friendly and future-oriented saw blade technology.

In order to optimize the performance of the WhisperCut circular saw blade sustainably, the Leitz engineers have designed innovative grouping of the saw blade teeth. Perfect staggered cut and reduced cutting forces are achieved due to intelligent arrangement of various edges to each other. The unique design ensures multi-purpose application in nearly all conventional wood-derived material panels and in solid wood and guarantees excellent cutting quality. The saw blade is absolutely quiet at idle and in operation, significantly improving the workplace environment. An important element for the considerably reduced noise emissions are new laser ornaments and a special damping material – vibrations are reduced and the processing quality increased. Thanks to the diamond tips and a stable tooth geometry, this saw blade has an extremely long tool life. The ability to be sharpened several times noticeably reduces costs.

The WhisperCut circular saw blade is designed for conventional cutting width 3.2 mm. This results in a number of benefits: For the WhisperCut circular saw blade, there is no need for new splitting wedge; thus no additional effort is required. Use existing scoring saw blades – so we can prevent further investment costs. On the other hand high stability of the saw blade is achieved which is essential for mitre cuts for example.

www.leitz.org

Perfect cutting quality in almost all wood-based panels, solid wood, plastic and non-ferrous profiles. (Picture: Leitz)

Leuco Q-Cut G6 Edition

LEUCO introduces the Q-Cut G6 Edition, a new panel sizing saw blade. This meets demanding requirements for cut quality with exceptionally long service lives. Carpenters, furniture manufacturers and interior design specialists now have an even better standard tool at their disposal.

At LEUCO, the "Q-Cut" product family stands for the highest quality in panel sizing saws. Within this family, the Q-Cut G6 Edition is now the new favorite in terms of service life. The new blade extends the already very long service life of the standard Q-Cut G6 saw blade by up to twice and more. This means that woodworking shops now have an alternative to the popular Q-Cut G6 as the standard blade for panel sizing.

LEUCO achieves the improvement through thinner blade bodies and greater lateral tooth projection. This leads to optimized chip flow and thus to less chip friction as well as less heating of the saw blade. Im-proved grinding parameters also contribute to high cut quality and longer tool life.

Another feature of the Q-Cut G6 Edition is the improved precision class of the patented easyFix hole, which has been improved to H7. This makes it easier to slide the saw blade onto the shaft. In addition, the shape is non-round instead of round. This results in fewer points of contact between the blade and the shaft, making it easier to mount without jamming.

The new "Q-Cut G6 Edition" is the favorite in terms of tool life in the LEUCO premium class for TC panel sizing saws. The new blade exceeds the already very long tool life of the standard saw blade "Q-Cut G6" by up to double.

The Q-Cut G6 Edition is characterized by quiet and smooth running. Six laser ornaments as well as several expansion slots reduce vibrations and thus also the running noise of the saw blade. This saw blade has a tooth group configuration consisting of two stronger- cutting leading teeth and four consecutive teeth. This feature is common to all panel sizing saw blades in the Q-Cut family. It now consists of five products:

- Q-Cut G5: Finish-cut quality in plywood, veneered wood-based materials, lightweight panels and panels with sensitive top layers
- Q-Cut K: For finish cut quality in the anti-fingerprint materials and in plastics
- Q-Cut G6: Finish-cut quality with very long tool life, especially cost-effective
- Q-Cut G6 No Noise: Additionally, very quiet
- Q-Cut G6 Edition: Finish-cut quality with extremely long tool life, cost-effective.

www.leuco.com

It's LIGNA again!

The Woodworking Community meets in Hannover

Over 105,000 square meters of exhibition space and more than 1,100 exhibitors: LIGNA 2023 (May 15-19- 2023) celebrates its return to presence with a comprehensive overview of the woodworking and wood processing industry. Despite the tense global political situation, the positive booking status confirms LIGNA's status as the world's leading trade show. Global players and renowned companies from all over the world come together to showcase tools, machinery and equipment as well as smart solutions and new technologies. In addition to companies from Germany, firms from Italy, Austria, Turkey, Spain, China, Sweden, Slovenia, Denmark and the Netherlands account for the largest proportion of exhibitors by area. In the process, the world's leading trade show has even been able to expand its exhibitor portfolio: this year, more than 180 first-time exhibitors intend to take advantage of the opportunities for business initiation and networking.

"LIGNA offers a unique overview of the entire value chain of the woodworking and wood processing industry. It is THE international showcase for innovations and THE stage for world firsts. We have been receiving a wave of euphoria from the community ever since planning began. The industry is looking forward to the face-to-face experience in Hannover," said Dr. Jochen Köckler, CEO of Deutsche Messe AG, highlighting the importance of the event at the LIGNA. Preview in Hannover. "At LIGNA 2023, visitors will meet exhibitors from 44 countries. This is where trends are set and discussed that shape the industry and point the way to the future."

LIGNA focus topics move the industry

LIGNA 2023 will also live up to its role as a trendsetter in its choice of focus topics. The topic of digitization is shaping the development of the industry and is a prerequisite for production that is as resource-efficient as it is flexible. Under the title "Woodworking Transformation", it is also receiving a great deal of attention at LIGNA. Exhibitors will show how far the networking of machines, tools, components and materials has already gone and will present innovations in the fields of robotics, automation and software. The buzzwords Smart or Connected Factory, Industry 4.0 or Internet of Things and IoT platforms will continue to become tangible at LIGNA with concrete examples.

Wood is also steadily gaining importance as a recyclable building material in the construction industry. The share of total construction volume accounted for by purely timber buildings and timber-mixed structures is growing continuously both nationally and globally. LIGNA reflects this industry trend in the focus topic "Prefab Building Processes": Because the increasing importance of timber construction also results in new requirements for technology and equipment.

www.ligna.de

Making more out of wood

World premiere of the new SAWTEQ B-300 and B-400 panel dividing saws

HOMAG will be presenting the all-new SAWTEQ B-300 and B-400 series panel dividing saws at LIGNA for the first time, both of which have been updated with significant and innovative new features. The cutting solution combines performance, speed and reliable technology with increased intelligence and digital, self-learning functions. This is reflected, among other things, in an increased performance level because of an improved sawing process and optimization with reduced energy consumption. Machine operation has also been rethought. Thanks to improved working positions, the way the operator works with the saw control system is now even more flexible and ergonomic. The intelliGuide Classic operator assistance system – which is now included as standard – supplements these optimizations and guides the operator through the cutting process safely and intuitively using LED signals. In addition, a new feature within the saw control system monitors optimal machine use and provides continuous support through appropriate information – another step toward intelligent machine control. The focus is also still on cutting quality. As well as materialManager Advanced, which automatically specifies optimal saw parameters, the machine is also equipped with a new function that uses sensors to detect the dimensional accuracy of the workpieces and transparently reports this back to the operator. This increases process reliability and provides more transparency in cutting.

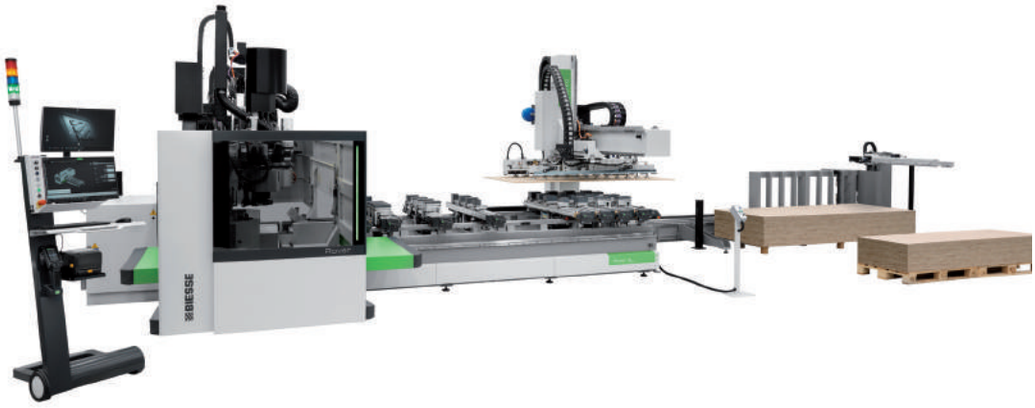
www.homag.com

A new visual identity

At LIGNA, Biesse will showcase a new visual identity that represents the corporate renewal process and actively expresses the group's values and identity – centred on multi-materiality and being inherently international – while preserving the features that distinguish the various sectors in which it operates. It's an evolution that will enable the company to compete in ever-changing international markets and bring tangible benefits to customers.

Technology in action

In Hall 11 Biesse shows the group's evolutionary journey and its emphasis on multi-materiality, which distinguishes Biesse from its competitors. "High-tech solutions, integrated systems and lines designed to accommodate the needs of manufacturing companies wishing to strengthen and increase production performance will be in action," says Ettore Vichi, Chief Regional Officer EMEA and APAC. A great emphasis will be placed on automated solutions, which ensure a decisive increase in production and the complete reliability of both the production process and the loading and unloading operations.



Visitors will get a first-hand look at an integrated plant consisting of panel sizing and nesting solutions, with automatic loading and unloading linked together thanks to SmartConnection, a software programme for in-house order management.

The focus will be on the new batch one edgebanding line with robotic loading and unloading. The dual characterisation of the new product marks the beginning of a path towards sustainability which, thanks to the skills and assets available, will enable the group to recognise and assess its environmental and social impact and integrate innovation into product development processes.

www.biessegroup.com

The best wood ever printed at LIGNA

Hymmen presents its latest and its established surface technologies. At the show, Hymmen aims to build on the recent successes of its digital printing technology on an international scale. In the last 12 months alone, 6 new JUPITER digital printing lines featuring Digital Lacquer Embossing (DLEplus) technology have been sold. This means that there are now over 50 JUPITER digital printing systems in operation. For the flooring industry, Hymmen has developed three possible finish options: Viscoelastic topcoat (AC5 falling sand), corundum (S42 Taber) or wear layer lamination. All surfaces convince with 100% synchronous pore structures.

A wide variety of digitally enhanced materials – including the flooring installed at the booth – can be viewed and touched. "The best wood ever printed" sums it up well: It is difficult to distinguish the planks finished with the multiple award-winning Digital Lacquer Embossing (DLEplus) technology from real wood. With the help of a graphic, the individual process steps of the production are explained to the interested visitor. In addition, film recordings show the production in real operation.

Of course, Hymmen's experts will also be available to discuss the proven press technologies, liquid coating, calendar coating inert and laminating equipment, as well as digital printing of décor paper with water-based inks using the SATURN Digital Printing Line. Samples of end products manufactured using these technologies are available for explanation.

Double belt press technology has recently enjoyed unabated attention in the laminate manufacturing market: Only in the fiscal year 2022, Hymmen had 6 continuous HPL lines in its order backlog. The double belt press can be celebrated as the "Grande dame of the wood-based materials industry", as it is already looking back on the completion of its 4th decade of life

www.hymmen.com

Innovative out of passion, sustainable out of conviction

Users can benefit in a wide variety of ways from the tool innovations at LIGNA 2023. For example, for the first time at LIGNA, LEUCO will present the woodworking and processing industry with a completely new, patent-pending concept for arranging cutting edges on basic tool bodies. Another novelty at the show will be the regeneration of fixed slide milling cutters. The advantages of the various innovations are wide-ranging, be it reduced power consumption, longer tool life, better edge qualities or saving resources, etc.

World premiere: New tool concept based on the Fibonacci principle

The research & development of machine tools for machining wood materials has always strived to find the optimum tool geometry. The engineers at LEUCO were inspired by nature and successfully transferred the Fibonacci principle to the tool world for the arrangement and distribution of the cutting edges on the basic body. The Fibonacci principle can often be found in nature when it comes to the optimum utilization of limited space. Well-known examples are the seeds of a sunflower or a pine cone, whose number is maximally and optimally distributed on the available space. Arrangement of the blades according to the Fibonacci principle is patent pending by LEUCO. This approach from bionics enriches and expands LEUCO's portfolio and is used where it achieves performance improvements. At LIGNA, LEUCO will present the distribution of cutting edges on the basic body according to the Fibonacci principle using several tool types, including a Z4+4 nesting cutter with a diameter of 12 mm, the jointing cutters with exchangeable cutting blades "SmartJointer airFace" and LEUCO p-System, and a disk finger cutter. The benefits for customers vary per tool type: the range of advantages extends from lower power consumption and a finer cutting pattern to higher feed rates and longer tool life.

Nesting cutter Z4+4 D12 with cutting edge arrangement according to the Fibonacci principle

www.leuco.com

Product innovations

Leitz will be exhibiting at this year's LIGNA in Hanover. At their stand, the specialists from Oberkochen will be presenting innovative, new technical developments as well as forward-looking service concepts. Leitz is focusing in particular on structural timber construction and on solid wood processors in the furniture and window construction industries. The world market leader is thus once again underlining its innovation leadership for user-oriented tool technology in the wood and plastics processing industries.

Above all, with a view to greater efficiency, productivity, quality and sustainability in everyday work, the Leitz specialists will again be bringing new tool solutions to the trade fair metropolis in Lower Saxony this year. Proving that where there is innovation on the outside, there is innovation on the inside.

For more efficiency and sustainability in timber construction, for example, the Leitz engineers have a drill with a TC replaceable head in their collection that will revolutionise machining processes in timber joinery. The idea behind it was the development of a new tool system that basically consists of a stable and reusable steel base body and an exchangeable boring point made of carbide. The big advantage for users is, above all, that the quick and easy exchange of the replaceable head reduces set-up and adjustment times many times over. In addition, the replaceable heads can be reground, which makes the entire system more economical over the entire life cycle than comparable standard drills. Finally, the basic body of the system only has to be purchased once. A specially developed tool geometry ensures process reliability and high quality of the drill holes. It ensures that the drill does not slip in the workpiece. Users also achieve significantly longer tool lives and have a tool that is less susceptible to breakage and particularly reliable – even when machining hardwood.

www.leitz.org

The new made in SCM automation on stage

SCM's Smart&Human Factory has once again been updated: new automation systems and human, machine and robot interaction for a highly customised, versatile, interconnected and sustainable production.

Also making its début at the trade fair is an integrated cell for small businesses and many other new entries for all the application areas in secondary wood processing.

The Smart&Human Factory for the furniture industry

The system of flexible cells on display in Hanover can produce up to 400 furnishing components per shift and is mainly aimed at furniture kit manufacturers. This is one of the many configurations that the Smart&Human Factory can assume based on customer demands. The cells are integrated with articulated robots and connected by unmanned AMR shuttles.

In the beam saw area, SCM will be presenting its new gabbiani gt2 flexible cell with articulated robot for automatic loading and unloading. The cell has been designed to optimise shifts and combine "batch 1" machining needs with those of large-volume production. The cell is enhanced by the new Maestro optiwise optimiser, and has been designed for manned or unmanned use, allowing for immediate and automatic switching between one mode and another: the robot positions or removes the additional modules between the shelves, required for it to work properly. In automatic mode with robot, the cell allows for work to be done with no shift limitations, relieving the operator of low-value work, and allowing for even small, finished pieces to be handled very easily. Pack cutting can be performed when operating in manned mode.

Other new entries include the morbidelli cx220 drilling and dowelling flexible cell with robot that creates all the parts of a piece of furniture more efficiently, even with pieces that differ considerably from one another. The cell produces a panel per minute and up to more than 400 panels per shift with a single operator in just 50 m^2. Its exclusive layout allows for two possible uses: unmanned, thanks to the integrated robot on the rear side that performs all the loading and unloading operations in complete autonomy for a continuous production cycle; with partial supervision by the operator who, in complete safety, can load and unload the panels at the front of the cell while the robot continues to machine on the opposite side.

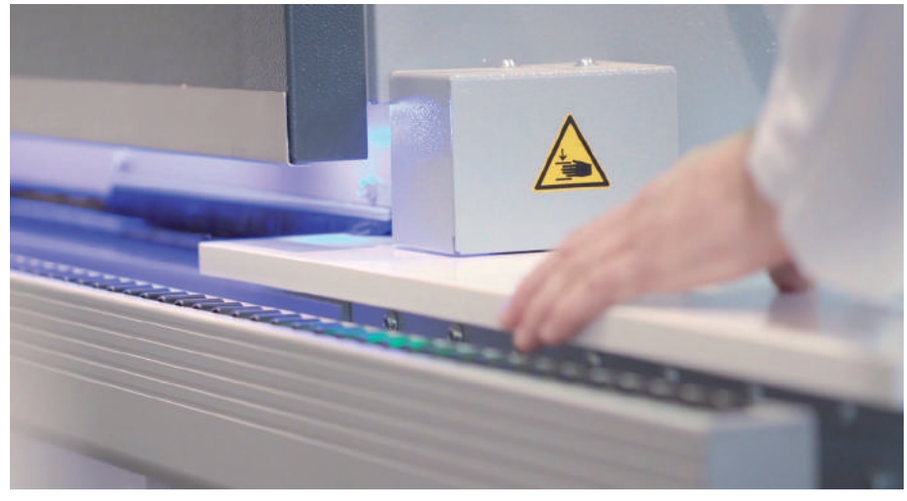
www.scmgroup.com

Green Adhesives in furniture and buildings

At this year's leading trade fairs LIGNA and Interzum, the adhesive manufacturer Jowat will put the spotlight on the major role played by modern adhesives in sustainable manufacturing processes and industrial products.

Sustainability has many different facets. Companies who want to make their processes and products greener need extensive expertise in that field and a 360-degree look at the issue. The same requirements apply for the use of modern adhesives. The development of new adhesives based on renewable raw materials and the expansion of a sustainable product portfolio are key focuses of the innovation and technology leader Jowat. As leading adhesive supplier to the furniture industry, Jowat has established its Green Adhesives – a complete package of trailblazing adhesives coupled with comprehensive services – to make bonding applications in furniture and buildings more sustainable, taking into account a wide range of aspects.

The green product portfolio is tailored to match all focus areas: renewable raw materials, employee and consumer safety, and resource conservation. Therefore, the GROW product family supplies a broad spectrum of adhesives based on biological or recycled materials. Reactive PUR hot melt adhesives with hazard-free labeling from the Jowatherm-Reaktant® MR series promote safety at the workplace and prevent costs for the additional training of processors prescribed in the EU. Special hot melt adhesives with low processing temperatures and high yield facilitate resource-saving manufacturing processes, and low- emission adhesives promote consumer safety.



Now also for edgebanding: Jowat Green Adhesives

www.jowat.de

Cefla Finishing takes part in the 2023 edition of LIGNA

Cefla Finishing will be showcasing the technological innovation that is the hallmark of its surface finishing solutions. On a LAB stand covering over 800 square metres, visitors will be treated to an in-depth preview of ground-breaking technologies and solutions.

There will be an area dedicated to industry 4.0; moreover, five production lines featuring high-efficiency machines will run continuously for the duration of the fair. Visitors can observe the transformation from raw materials to finished product for themselves, see the results first-hand and discuss the various technologies with our experts. Among others visitors can see the following:

Lamination equipment

Easily integrated into complete panel lamination and wrapping lines, they process reels up to 1400 mm in width and ensure high-quality gluing and work for a broad spectrum of substrate types and profile types.

Smartcoater PRO

Latest-generation roller coating machine featuring exclusive innovations for flat or slightly raised panels. Equipped with a soft rubber application roller and special pneumatic floating system to process poorly calibrated flat panels or panels with an up to 10 mm groove.

www.cefla.com

Premium partner for cutting-edge technologies in the digital age

The Weinig Group, with its two brands Weinig and Holz-Her, will be presenting groundbreaking solutions for these focus topics at LIGNA 2023. The Weinig trade fair highlight are large-scale systems and innovations in wood processing Systems engineering is increasingly becoming the focus of Weinig.

The highlights at LIGNA are

- an optimizing cross-cut line with an OptiCut 450 Quantum cross-cut saw, connected to a finger jointing line and robot stacking;
- a ProfiPress C 2500 HF gluing press for the production of wooden panels.

Large-scale system: Scanning, cross-cutting, finger jointing

This fully automated system shows the production process from raw material to finger-jointed lamellas:

A robot with a vacuum unit stacks raw material onto the line. The workpieces are evaluated by means of a CombiScan Sense scanner. Defects are cut out by the high-speed OptiCut 450 Quantum cross-cut saw and the good parts are automatically fed to the downstream HS 200 finger jointing line for further processing. The mechanization for direct feeding of the finger jointing line via the cross-cut saw is patent pending.

With a clear edge into the future

In the entry-level range, Holz-Her will be presenting the new Streamer XL Power, an axis-controlled edge bander with six NC servo axes, at LIGNA. The essential machining processes can thus be selected at the touch of a button, while the rest is set via the intelligent VISE system. The large 15.6" multi-touch screen displays all remaining setting values to the operator. VISE stands for VIsual SEtting and is used for intelligent and visual support of the machine operator. VISE acts as a digital logbook providing all setting values for the digital counters and pressure gauges, allowing the operator to set up the machine quickly and safely.

www.weinig.com

Fagus-GreCon presents numerous product innovations

With its extensive investments in product development and services, fire protection and measuring technology specialist Fagus-GreCon considers itself well positioned for the trade audience at LIGNA. As in the past, the company will present many innovations at the largest leading trade fair for woodworking and wood processing plants, machines and tools from 15 to 19 May.

Digital transformation, increasing demands on efficiency and the resource-conserving use of wood as a raw material as the driving force behind green materials processing – with its focus on current industry topics, LIGNA is probably the most important trend barometer for the entire wood-based materials industry.

Measurement technology highlights

The further development of the inline thickness measurement GreCon THICKNESSCONTROL focuses on the constantly increasing demands on measurement technology systems. The robust system enables measurements of almost the entire panel, even at high production speeds. With GreCon GASANALYSER MC, the company presents its innovative product development for determining the formaldehyde emission of wood-based materials. Outstanding

features are the considerably shortened testing times, improved operability and noticeably extended calibration intervals.

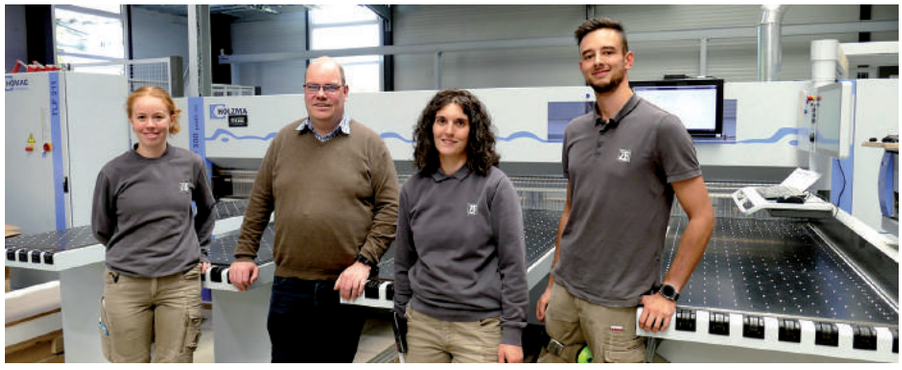
www.fagus-grecon.com

On the edgeband, get set, go!

Comprehensive and consistent edgeband management?

That's no problem with the edgeband assistant – ZB Holzsysteme shows us how!

ZB Holzsysteme from Rastede, northern Germany, specializes in the production of furniture and objects. They work as suppliers for woodworking shops and industry as well as for architects, planning offices and private customers. With a team of around seven employees, ZB Holzsysteme stands not only for outstanding quality, but also for state-of-the-art technology in combination with machines and digital products from HOMAG.



ZB Holzsysteme makes use of machines and digital solutions from HOMAG

Whether its CNC machines, a SAWTEQ B-300 panel dividing saw, an edge banding machine (EDGETEQ) or a STORETEQ S-200 as a saw-panel storage combination, the joinery primarily owns machines from HOMAG. It is not only the machines that enable more efficient day-to-day work, the use of digital products also greatly simplifies the production process. Manuel zum Buttel and his employee Katharina Höppner use the edgeband assistant from HOMAG. The edgeband assistant, also known as Edgeband Management Set, provides an overview of all information about the edge material as well as the material stock. Finding the right edgeband quickly and easily without lengthy searches and keeping an overview – that was exactly what zum Buttel was looking for. For ZB Holzsysteme, it therefore became immediately clear that the edgeband assistant from HOMAG was the ideal digital solution.

Edgeband management without limits

The fact that the edgeband assistant can easily manage even large quantities of edgebands can be clearly seen in Manuel zum Buttel's joinery. In addition to the exceptionally high and long edgeband rack, the variety of edgebands handled in the joinery is also impressive – ZB Holzsysteme processes over 1000 different edgeband materials and has 700 edgeband rollers in stock with a total length of over 32,000 running meters. "Since the introduction of the edgeband assistant, managing these quantities is no longer a problem. We always have an overview, know where each edgeband is and how much stock we still have in the warehouse at all times," explains Manuel zum Buttel.

Edge chaos has been a thing of the past ever since. In the materialManagerapp, which is part of the edgeband assistant, all information such as the edge code, decor code, manufacturer and other information relating to the edge data is created and managed centrally. This enables all employees to have a permanent overview of stock right from the work preparation stage. The edgeband rack in production saves both space and time, as fast edge changes are no longer a challenge and there are no more lengthy searches for the right edgeband.

Edgebands can also be stored and managed outside the edgeband rack in other storage positions, such as pallets. The edgeband rack is supported by the corresponding digital assistant materialAssist, which makes it easier than ever to store and retrieve edges. The tablet mounted on the edgeband rack ensures that the storage and retrieval process is quick and easy, with a simple click or by using a connected scanner. After edging, the edgeband roller is returned to storage, the consumption or roller dimensions are entered and the offcut length is calculated automatically in the materialAssist app.

Digital products can be expanded to meet individual needs

The employees at ZB Holzsysteme have found their own way of determining the offcut length: "We have created specific QR codes that we scan with our scanner – which we also use for materialAssist – and thereby we can determine the offcut length of the edgeband even faster," reports trainee Luisa Schäfer. She too is enthusiastic about the digital products and believes that digitalization is ever-increasing in woodworking shops.

Even more digitalization

It is not only the edgeband assistant that is used in the joinery, but other apps and digital assistants, such asproductionManager – known as the digital job folder – also support the production process both in work preparation and in production.

www.homag.cm

Two hundred high-tech bandsaw modules already delivered

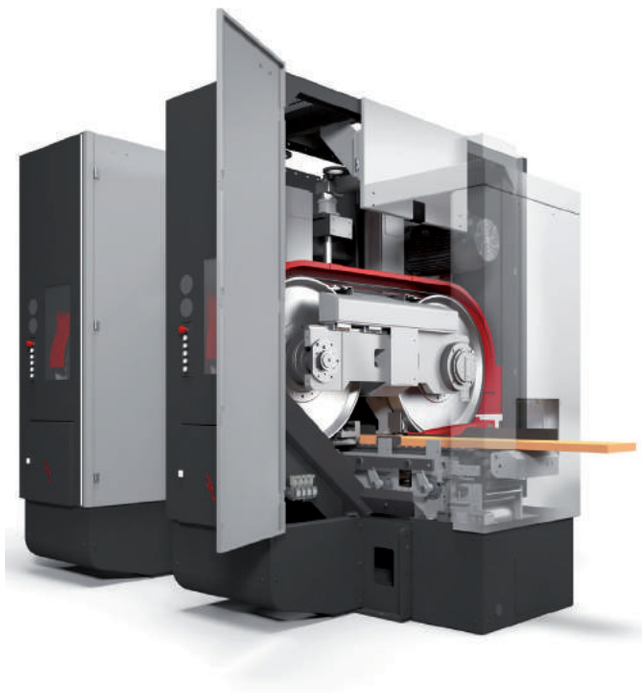
Fill has been building wood processing machines for more than 50 years and has been involved in bandsaw technology for some 15 years now. Meanwhile, the 200th SPEEDLINER 920–350 HYBRID bandsaw module has been delivered to a customer, where 14 saw heads were installed all at once as part of a major project. Influenced by the quality requirements of the automotive industry, Fill SPEEDLINER bandsaws have become the state of the art in industrial board production. The fact that a company which influences the high standards of the international automotive industry also manufactures production systems for the wood processing industry is both a rarity and a fortunate outlier. Fill frequently acts as a general contractor on major projects involving the fully-automated production of millions of square meters of three-layer boards per year. The majority of these enormous systems, such as bandsaw lines, sorting systems, joint gluing systems, spot repair systems, and logistics equipment, are manufactured by Fill itself.

Fill has been developing and building high-precision fine-cutting bandsaws for the production of lamellae since 2007. 150 million square meters of wood are cut worldwide on Fill bandsaws every year. In Europe, all the prominent board producers manufacture their products on systems from the Upper Austrian machine engineering company. “When it comes to industrial cutting of sawn timber into lamellae for the production of multilayer boards and parquet, our high-performance fine-cutting bandsaws of the SPEEDLINER product family have become the industry standard worldwide. We have brought together precise fine-cutting and high performance under one roof,” explains Erwin Altendorfer, Head of the Wood Competence Center at Fill.

Precise and productive

The SPEEDLINER bandsaws combine maximum precision with performance and flexibility. Their sturdy construction and use of high-quality components allow multilayer operation in consistently high quality for many years to come. Depending on the raw material, the high-performance bandsaws can be operated with feed rates of up to 40 meters per minute. The extremely narrow kerf of as little as 1.1 millimeters enables substantial material savings and ensures highest levels of efficiency and cost-effectiveness. This is supplemented at Fill by the extensive project management expertise acquired from years of experience with major projects. Depending on individual requirements, Fill SPEEDLINER HYBRID bandsaws can be operated as freestanding machines or as multi-head systems with several in-series, automated modules. With new methods for processing and preparing wood, the Upper Austrian machine engineering experts are creating innovative and sustainable solutions in timber construction.

www.fill.co.at



Better than the original

Müller Manufaktur is gradually replacing the original clamping devices of its machines from the Italian manufacturer SCM with the new Schmalz vacuum blocks VCBL-S6. They not only reduce set-up times and are cheaper to purchase, but also offer higher holding forces.

The vacuum blocks VCBL-S6 from Schmalz have significantly improved the processes at the furniture manu-facturer Müller Manufaktur.

The teat cup can be fixed in the receptacle without tools in 15-degree increments using the orange clamping levers.

Short set-up times: Adjusting the rotating suction blocks and changing the suction plate is quick, easy and tool-free for carpenter Michael Spinner.

Markus Hermann (left), Managing Director of Müller Manufaktur Möbelbau GmbH, with Matthias Schmider, Product Manager at Schmalz.

Müller Manufaktur Möbelbau GmbH, founded in 1930, operates in the premium sector of woodworking. The company, based in Bad Rippoldsau in Baden-Württemberg, develops individual office furniture for well-known companies. The portfolio includes conference tables, side and highboards, workstations, cabinet modules and reception counters. Müller Manufaktur also equips educational and research institutions as well as German embassies worldwide. In the modern company near Freudenstadt, twelve employees share a love of wood in perfection – and have also established a strong international presence with their exclusive products.

In order to produce the high-quality pieces of furniture precisely and with little waste, the company uses, among other things, modern CNC machining centres from the Italian manufacturer SCM. The Morbidelli m²00 is used to produce flat workpieces such as table tops or work surfaces in small quantities or one-off production. The machines can machine the blanks from five sides, whereby high lateral forces occur that the clamping system must securely clamp despite rough surfaces or curved contours. The furniture manufacturer was not entirely satisfied with the original vacuum block suction cups from SCM used until then. "In terms of stability, they are comparable. However, if the SCM vacuum blocks are damaged, it is very difficult to replace the sealing lip because we can only disassemble them with a flat-blade screwdriver and a lot of tact," describes Michael Spinner, carpenter at Müller Manufaktur Möbelbau GmbH and machine operator. "In doing so, there is a risk of damaging the suction cup even further." In addition, the carpenters have to readjust the sealing lip several times until it fits perfectly. The financial aspect was also a thorn in the carpenter's side: the original vacuum blocks are expensive.

Coordinated with SCM

In this context, Müller Manufaktur gladly accepted the offer from vacuum specialist J. Schmalz GmbH to test its newly developed vacuum blocks of the type VCBL-S6. "We have precisely adapted the new clamping system to the consoles of the SCM machines," describes Matthias Schmider, Product Manager at Schmalz. A robust base body made of glass-fibre reinforced plastic supports the suction plate with diaphragm either directly or is equipped with an elevating suction cup. The machine operator can simply fix this in production in 15-degree increments with a clamping lever. The sensing valve allows unused suction cups to remain on the machine. "This also reduces the set-up effort," Schmider emphasises.

The suction plate protects the vacuum block from penetrating chips with a membrane. The elastomer part provides optimum sealing and can be replaced quickly and without tools when worn. To prevent errors when ordering spare parts, Schmalz has equipped the VCBL-S6 vacuum block with an NFC tag (Near Field Communication). When the user places his smartphone on the clamping device, he can see all the relevant product data directly in the Schmalz ControlRoom app.

Holds up perfectly

The vacuum blocks from Schmalz have been in use at Müller Manufaktur since June 2021 and deliver convincing results. "The holding force is 20 percent higher compared to the SCM original, while the stability is comparable," describes Hermann. The company also benefits from reduced set-up times: The carpenters can quickly adjust the rotating suction block and replace damaged suction plates easily and without tools. The high holding forces have significantly improved process reliability at high feed rates and cutting depths. Compared to the original, the height tolerance with Schmalz is more dimensionally accurate, emphasises the Black Forest-proud master carpenter, as the managing director introduces himself in social media. The mixed operation between the suction cups from SCM and Schmalz also runs smoothly, he adds. This is important because Michael Spinner wants to use up the standard stock of SCM product first before he gradually has the VCBL-S6 variant installed. Meanwhile, the further goal is clearly defined: "We will gradually switch completely to the Schmalz solution.

Since the pilot project at Müller Manufaktur, regular contact with Schmalz has developed. "We are now the direct contact when it comes to new projects or feedback from the field. Both sides benefit from this," outlines Managing Director Markus Hermann, who was closely involved in the project. He gives good marks to the cooperation in the project phase: "This has always gone smoothly, and Schmalz has always taken into account the different workloads of our joinery when scheduling."

www.schmalz.com

Panel-sizing and sorting line

The MHF panel-sizing and sorting line stands for particularly efficient and space-saving integration into the production process. The plant concept is based on a modular design where all components – feeding system, edging saw, panel-sizing saw, transfer unit and sorting and stacking system – can also be used individually.

Feeding system

Packages can be formed from a stack of large size panels via the feeding system by means of a conveyor lift with pusher and then fed to the panel-sizing saw. The feeding system can be adjusted to meet client's requirements or can be designed individually. And works for all machinable materials such as chipboards, plywood boards, HDF, MDF, OSB with maximum size of the boards: 2500 × 5600 mm

Edging saw integrated into the feeding system

An additional edging saw can be integrated in the feeding system to increase the cutting performance. This concept also enables an automatic discharge of the cut off strips below the saw and a manual removal is not required.

Advantages panel-sizing saw

The saw, designed by MHF according to the proven principle of the Teutomatik saw, offers fully automated cutting of large size panels.The saw blade can be swivelled by 270 degrees via a rotary tube and all cuts are made automatically one after another.

- Maximum cutting length 5,600 mm
- Low space requirement due to lengthwise and crosswise cuts in one system
- Careful handling of the product due to the moving saw, the product does not move during processing
- High cutting performance
- Minimum cutting height 10 mm
- Maximum cutting height 165 mm

Saw table

Rising longitudinal and transverse stops as well as an aligning rail and a chain-driven pusher align the boards on the saw table.

By raising individual conveyor belts in the saw table, cut panel strands can be conveyed out and further cross cuts can be made on the remaining stack.

Transfer unit with pusher

Via a roller conveyor with extraction channels at the top and bottom as well as another one with an overhead pusher, the micro stacks produced by the panel-sizing saw are fed to an angular transfer and the subsequent sorting and stacking system.

If the stacks need to be rotated, a pusher transports the parts over polished lifting bars, which enable a gentle sliding, onto a robot gripper. Then the robot rotates the stacks by 90° and places them on the outfeed roller conveyor.

The transfer unit can be individually adapted to your needs and to the structural conditions on site.

Sorting and stacking system

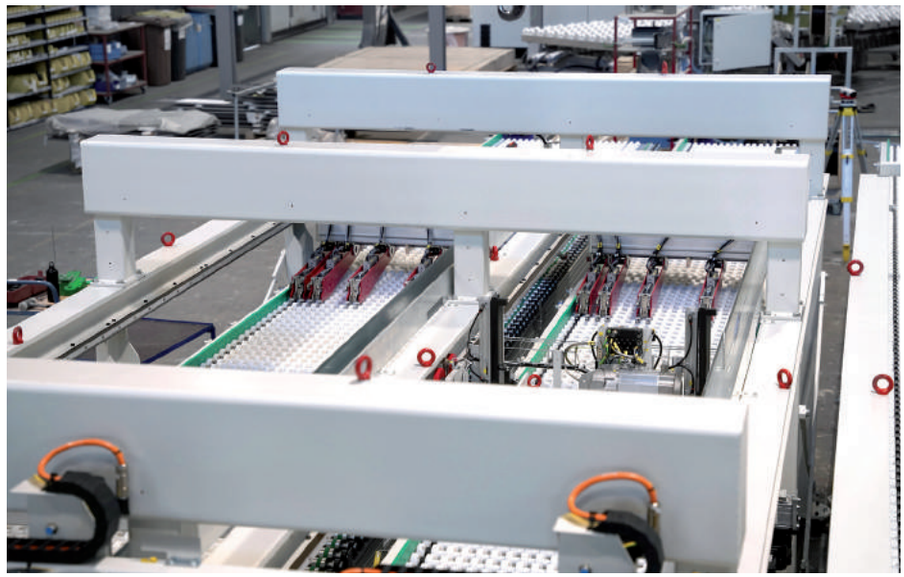
Stacking of the micro stacks takes place fully automatically on lifting frames arranged on both sides. The micro stacks fed in are pushed by a pusher onto base boards which are automatically indexed downwards by the lifting frame.

The stack supporting base boards can be automatically fed in advance from a magazine. The finished stacks are discharged centrally below the upper roller conveyor.

www.mhf-gmbh.de

Increased cutting efficiency

IMA Schelling has an efficient solution for woodworking companies that require a cutting performance of up to 6,000 parts per shift in batch size 1: the plant manufacturer will proudly introduce the hl 1 high-performance unit for cutting to size.



In up to four tracks, the strips can be fed independently to the crosscut saw and cut together.

Optimally suited cutting concepts make a decisive contribution to the economic success of a furniture production line. With its high-performance, material-friendly, and resource-saving panel saws and cut-to-size plants, the IMA Schelling Group has the ideal solution for every production strategy and performance class – from standard to high-performance units for cutting to size.

IMA Schelling has developed the hl 1 machine concept for an output of up to 6,000 parts per shift. In this process, a rip-cut saw for generating strips from the raw board is combined with a cross-cut saw that generates individual components from the strips. "This in itself is nothing new, but there are a few complementary factors that add up to a significant increase in performance", explains David Schelling, Product Manager Cut-to-size at IMA Schelling.

Higher speed, proven technology

Since a hogging unit is positioned before the rip-cut saw, this results in a saving of one cutting cycle per strip. This has the advantage of relieving the strain on the cross-cut saw. In contrast to solutions previously available on the market, the hl 1 does not feature more processing units, but rather more feeding components. In up to four lanes, strips are thus fed to the cross-cut saw independently of one another and cut together. In this way, four components can be produced every twelve seconds with just one unit. This not only reduces energy and tooling costs, but also makes maintenance much easier.

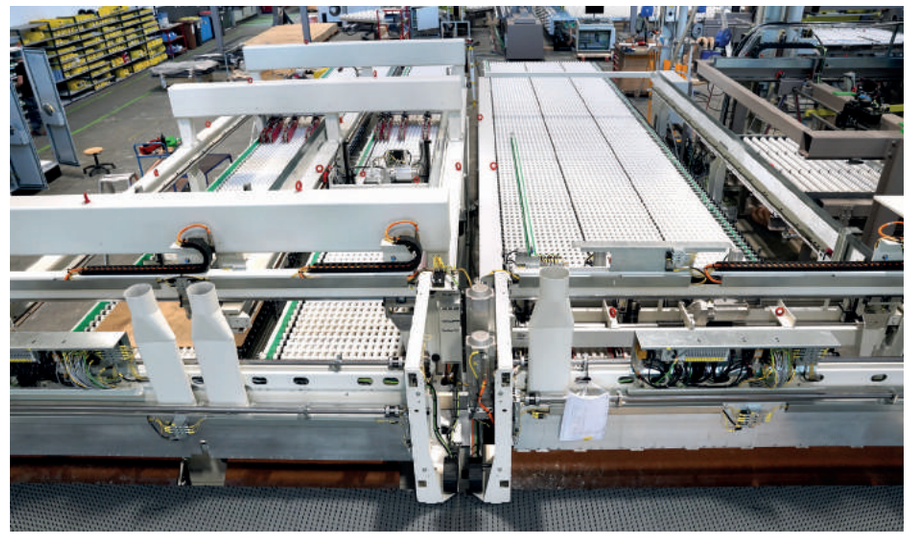
Flexible modular solution

"As a modular solution, the hl 1 cutting solution offers our customers great flexibility", emphasized Schelling. Depending on the production strategy and available setup space, the modular system allows the company to respond to any and every requirement their customers may have. The area after the rip-cut saw can be provided with a buffer track or with a strip buffer. Likewise, it does not matter whether the transfer of the strips to the cross-cut saw is to be realized with a repositioning gantry or with an industrial robot.

The cross-cut saw can be designed with three or four lanes in different widths, depending on the component spectrum. The saw lines can be arranged relative to each other just as flexibly: in line, at an angle, as a U, or even on two levels, one above the other. Workpieces that require re-cuts are returned upright, thus saving space, and fed to the cross-cut saw again. For projects where an output of up to 3,000 parts per shift is sufficient, strip and part production can also be implemented on one saw line.

Feedback from the field inspired IMA Schelling to develop the product. "We have found that there is a lack of suitable concepts in this performance class. In the past, many customers – when space was available – made do with multiple plants of lower performance classes. But that makes little sense in our eyes", Schelling said. "With the hl 1 high-performance unit for cutting to size, our customers now have the opportunity to make their automated production processes even more efficient." Several customers have already ordered the cutting solution and the first systems will be delivered in the next few months.

www.imaschelling.com



The cross-cut saw is relieved of workload during high-performance cutting hl 1 by a chipping unit in front of the longitudinal saw.

Perfect-family

A sustainable Hydro alternative to solvent-based 2C polyurethane lacquers

The Hesse Perfect-family is a fully-fledged and sustainable alternative to conventional solvent-based 2C PU coating systems. Because the switch from solvent-based systems to Hydro lacquers saves up to 1 kilo of CO_2 per square metre of coated surface. Yet without compromising on quality.

This family consists of products that have been proven for many years – augmented by the latest developments. The aim is to provide a solution in the two-component Hydro sector that equates to polyurethane coating systems in terms of processing and resistance. It fits perfectly within the sustainability strategy pursued by coating and stain specialist Hesse from Hamm.

The Hesse Perfect-family features a superbly coordinated product range. The system highlights are represented by easy handling with just one hardener, coupled with optimum resistance. All family members are certified with regard to low flammability under IMO and the newer and Europe-wide standard DIN EN 13501–1.

Special training in the handling of diisocyanates is not required prior to using the hardener. The hardener component is REACH-compliant and already meets the low NCO monomer limit for isocyanates of less than 0.1 % that will soon be applicable.

The Perfect-family includes Perfect-Fill, which has been developed as a system filler for combination with Perfect-Color. Its wide range of applications, such as use on high demand surfaces even in damp environments, and its user-friendly processing make it a universal filler for the entire spectrum of interior fittings.

Perfect-Color is a fast-drying, eco-friendly color lacquer with outstanding levelling properties, which particularly excels when it comes to forced drying. It can therefore also be used as an alternative low-solvent option for series production. Even heavy workpieces can be stacked and/or further processed already next day. It attains the utmost chemical and mechanical resistance, which is why it is used for interior fittings in all areas, including kitchens, bathrooms, doors and shop fitting.

Perfect-Top is a totally versatile top coat with all-round talents including great accentuation and brilliance. Its outstanding mechanical and chemical resistance ensures high quality surface protection on all interior fixtures and fittings. It can also be used to achieve creak-free coating of wooden stairs and to safely coat children's toys.

Perfect-Base is the fourth family member. This lavish basecoat provides excellent accentuation and ensures top mechanical and chemical resistance. Perfect-Base is ideal for surfaces that are subjected to heavy use and for content-rich woods.

The Perfect-family is a paragon of modern and sustainable coating methods, with easy and safe processing paired with excellent durability. This makes it the perfect eco-aware alternative to previously used PU lacquer systems.

www.hesse-lignal.de

A surface that resembles a journey through time

From New York in the "Golden Twenties" of the 20th century to swinging London of the 1960s and the heart of minimalism in the 2020s – REHAU's RAUVISIO noir surface collection boasts a colour palette that inspires interior architects and designers to create unique projects. Each of the 12 colours represents a decade, while reflecting the spirit of the time, thanks to its super matt finish. RAUVISIO noir has all the benefits of the RAUVISIO family – and can be cast in a single piece to match the design of other REHAU interior products.

Every stylistic era has its own colour and design scheme. During the Swinging Sixties, chic and style featuring muted, classic colours found their way into our homes. During the 1970s, newly won freedoms were reflected by vibrant colours and organic shapes. The 1990s discovered neon as a design element, while most recently, minimalist, often monochrome designs reproduced the spirit of the time. REHAU's elegant matt RAUVISIO noir collection brings this diverse stylistic history to life, thereby inspiring eye-catching, memorable designs. "Our customers include interior architects and designers who have their own ideas and visions. We use mood boards to support their creative process and provide suggestions when looking for combinations – while consciously offering maximum freedom for individual design," says Vincent Kummer, Marketing Director Interior Solutions at REHAU.

Enabling Exceptional Design

Enabling Exceptional Design is the motto of the Interior Solutions Division and the RAUVISIO noir collection is the perfect ambassador for this, thinks Vincent Kummer: "Enabling Exceptional Design is our mission. This journey through time reveals the diversity and opportunities of combining surfaces by matching designs. This provides architects with precisely the scope they need to turn their ideas into reality." The surface collection therefore combines elegance and the highest level of craftsmanship. "Our aim is to generate momentum so that the material can be used for exceptional creative achievements." The silky matt finish turns surfaces into a tactile and visual highlight. The robust HPL surface is a versatile material that is suitable for mechanically highly stressed horizontal use as a worktop in the kitchen or a counter in a shop, for example. The 12 carefully selected colours provide countless opportunities when designing funiture and interiors – especially as RAUVISIO noir can be combined with other REHAU products to match their design. For example, front panels can be extended to include perfectly fitting RAUVOLET elegant matt cabinet shutters. And anyone seeking a more affordable alternative for vertical areas can perfectly combine this surface collection with RAUVISIO brilliant elegant matt – without having to compromise on the look and feel.

Ultimately, the end customer not only has an aesthetic highlight in their home, shop, office or bar – REHAU products also meet the highest standards in terms of quality and functionality. The easy to clean, antibacterial RAUVISIO noir material features anti-fingerprint and soft touch, is highly resistant to scratches and microscratches and reflects hardly any light even at flat angles. Excellent heat and water resistance as well as impact resistance round off its functional benefits.

Experts are impressed by this combination of style and functionality: the collection has now received three design awards. RAUVISIO noir won the reddot award in 2021, followed by the German Design Award and iconic Innovative Interior Award in 2022.

www.rehau.com

Lighting sources for laminate floor grading

"When we can't find components in the market that meet our standards, we develop our own. We never compromise on quality" says Jan Sandok, Technical Director in Argos Solutions.

Detecting defects in laminate flooring requires trustworthy technology and solutions, for the developers in Argos Solutions, this means carefully considering the wood and panel specifications to develop the best surface grading technology.

One of the specific characteristics of laminate flooring, is the overlay manufacturers apply to protect the panels against fading, wear, and tear. The grading systems must have advanced light sources to detect defects in this overlay. This specific light source is the only one that can discover defects in this type of foil.

An in-house developed lighting package tailor-made for laminate flooring surfaces

For the past months, the technical team in Argos has worked hard to develop the best lights for the laminate flooring grading system. One of the strengths of developing these internally, is that they can offer light sources that are tailor-made to fit their systems and high requirements. They also benefit the customers by being more trustworthy and cost-efficient.

Jan Sandok is responsible for testing the new light source. "For this system, we needed to find the most powerful light diodes that can be adjusted to our aluminum frame and that are compatible with cameras, cooling, and remaining technology. We have managed to develop a complete lighting package that is essential in securing the desired quality of the flooring panels."

Argos' in-house development has proven to be one of the criteria for success. The feedback from customers confirms that Argos has the experience and competence to develop and deliver cutting-edge technology, adapted to individual customer needs and surface specifications.

The new, innovative light source, which is specifically adapted to the remaining electronics and hardware, has already been installed in the new laminate floor grading solution delivered to Kastamonu Entegre and will be implemented in future Automatic Grading systems for laminate flooring and melamine presses.

www.argossolutions.no

Argos Solutions, based in Kongsberg, Norway, is a world-leading technology company that has developed digital inspection systems since 1997. Their core business is engineering, design, and manufacture of Surface Grading Systems and Panel Repair Systems for the wood panel and building industry worldwide. The company has delivered more than 400 systems to customers all over the world.

Future-proof wood protection

In view of resource scarcity and advancing climate change, environmentally friendly coating solutions tailored precisely to current and future climatic conditions are in greater demand than ever before. With innovative and sustainable products for the surface protection of wooden windows, doors or furniture made of wood, Remmers is consistently moving towards a "green future".

Extremely resource-efficient: the water-based, hydrophobic impregnation Induline IW-130.

Induline IW-130: Environmentally friendly and resource-conserving coatings

The water-based, hydrophobic impregnation Induline IW-130 is a genuine innovation. For instance, this innovative product is ideal for coating dimensionally stable components and significantly expands the recycling possibilities of the natural building material wood. This means that numerous wood products and components can be returned to the recyclable material cycle at the end of their service life. This is because the impregnation does not contain any film-preserving or wood-protecting biocidal agents that make material recycling more difficult or prevent it in many conventional coating structures. Induline IW-130 also impresses in terms of performance. The special formula provides preventive, physical protection against moisture, thereby significantly reducing the risk of surface blueing. The new product also has good flow properties on raw wood and can be processed without any unpleasant odours.

Induline LW-722 [eco]: "Green" coating for timber/aluminium windows

An important part of the new Remmers [eco] range is the resource-saving, water-based and transparent coating Induline LW-722 [eco] – a perfect solution for the surface protection of wood-aluminium windows. The innovation is based on a biomass-balanced binder. For the production of this binder, the fossil raw materials were almost completely replaced by renewable raw materials, ensuring a sustainable reduction in CO_2 emissions. What's more, Induline LW-722 [eco] has excellent environmental properties that contribute to a healthy living climate. Induline LW-722 [eco] can be easily processed in single-layer and multi-layer applications and makes windows virtually maintenance-free. The coating has a good flow and is also UV and colour resistant.

Induline LW-742 Xclimate: Perfect for tough climatic conditions

Remmers recommends the water-based, glazed intermediate and finishing coat Induline LW-742 Xclimate for wooden components that are exposed to particularly challenging climatic conditions. It is characterised by a temperature-independent, permanently elastic and therefore extremely weather-resistant surface. This means that it can also withstand extreme direct weathering outdoors, thereby protecting the wood reliably and permanently from all weather events, today and tomorrow. LW-742 Xclimate will be available from summer 2023.

COOL+: Cooling effect for windows and external doors

Due to rising climate temperatures and the associated heating of windows and external doors through solar radiation, Remmers has developed the powerful cool-coating-technology. The COOL+ pigmentation principle is both simple and intelligent. Through the use of special colour formulas, the particularly heat-intensive infrared portion of sunlight is largely reflected in the system structure and heating is thus reduced by up to 25 %. This cooling effect is particularly effective with dark colours. The result: lower surface temperatures and an extension of the service life and maintenance intervals of the coated wooden components. Remmers offers two water-based, opaque intermediate and finishing coats with COOL+ pigmentation for windows and doors: Induline DW-601 Aqua Stopp and Induline DW-625.

The new products in the wood protection sector will be launched from 17–22 April 2023 at the Remmers stand at the leading international trade fair BAU in Munich (Hall B6, Stand 402).

www.remmers.com

Digital printing as a success factor in flooring production

Even 10 years after their introduction, the JUPITER Digital Printing Lines from Hymmen are the technology of choice for Classen

Classen has relied on the single-pass JUPITER technology from Hymmen right from the start and now uses 5 digital printing lines to finish its flooring. On the 10th anniversary of the commissioning of the first line to produce laminate flooring at the Baruth site, it is worth taking a look back at the success story of digital printing at the flooring manufacturer.

The market situation for decorative surfaces in the flooring sector

The standard "beech ship's floor" look for flooring was already out in 2012. Customers showed the need to design their furnishings and thus also their floors more individually. And this at affordable prices.

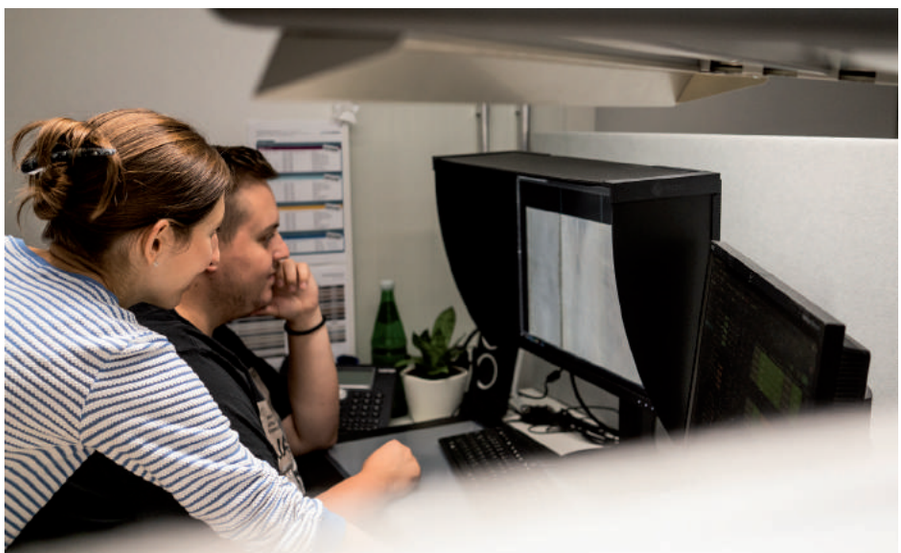
Sales staff at Classen – a leading supplier of laminate and PVC-free designer flooring – had been observing this market trend for some time and therefore expected their own customers – specialist and DIY stores – to be even more keen to differentiate themselves from their competitors in the future. This would bring with it a greater variety of decors to which they would have to adapt.

A challenge for all flooring manufacturers. Up to now, only papers printed with decors have been purchased from external service providers and glued (laminated) onto the core board. The minimum purchase for such decors is enormous, so that often 15,000 to 20,000 m^2 of flooring must be processed. However, if customers from the specialized trade often only wanted to purchase high-quality, exclusive flooring in quantities of less than 500 m^2, this would inevitably lead to high capital-binding inventories that might not even be needed later.

The machine and plant engineering company Hymmen from Bielefeld also anticipated this market trend and, with foresight, began developing digital printing technology for decor specialists in the wood-based materials industry back in 2008. After all, digital printing is the answer to the evolving needs for flexibility, variety, and small batch sizes. Compared to other industries, special needs had to be met: Relevant for the success of digital printing technology in the flooring industry are its industrial capacity, the applicability to a wide variety of substrates and the connection of the digitally printed surfaces to further processing in the production process (pressing, finishing in liquid coating systems). In addition, extraordinarily high demands are placed on the quality of the surface. Not only regarding the decor, but also regarding aspects of chemical and physical abrasion resistance.

Joint development project

Ten years ago, in 2012, digital printing technology for flooring was still in its infancy. "Nevertheless, we at CLASSEN had the idea at that time to enter digital printing and to print certain decors for our laminate floors ourselves," recalls Daniel Schwoch, today head of the pre-coating and digital printing division with 70 employees at the Classen Industries laminate plant in the Classen Group blog. "On the one hand, we wanted to constantly improve and be the innovation leader in our field. On the other hand, we wanted to be able to respond even better to our customers' wishes for smaller batch sizes, exclusivity, decor variety and flexibility," he says, describing Classen's motivation for setting up a digital printing project team. Together with the



strong backing of Classen's management, the team set out with enormous speed. The development partnership with Hymmen began with the common goal of making digital printing an industrially viable printing technology for floor production. The main arguments for investing in the technology, which is now ready for series production, were its cost-effectiveness with the simultaneously very large decor and plank variety and flexibility in production, the outstanding print quality, a sufficiently high process speed and printing in full production width of 2,100 mm.

"We at Hymmen were pleased to win Classen for this forward-looking technology so early on," says Dr. René Pankoke, managing partner and CEO of Hymmen, looking back on the early days of digital printing at Classen. "The confidence in the good cooperation in this new business field is certainly due to the good experiences Classen has had in the past with other production technologies from Hymmen," suspects Pankoke. A 2-meter-wide single-pass printer for sheet goods was unique ten years ago. Up to that point, Hymmen had built systems up to 1.2 meters several times. "Right from the start, we focused on modularity and maximum operational reliability of the components. That's why we didn't shy away from the challenge of a system with a printing width of more than 2 meters," says Pankoke. "Of course, such a development always requires intensive cooperation between both partners. It was a pleasure to work with the Classen team," adds Carsten Brinkmeyer, Head of Business Development at Hymmen. "The cooperation was always solution-oriented even when dealing with the usual problems in the context of a new development. The result has delighted everyone." This is because within a year, we developed a worldwide unprecedented printing press, which could be integrated into the Classen – laminating process. "The use and operation of 120 print heads in one machine was an enormous challenge at first." Carsten Brinkmeyer admits, "How times change is shown by the fact that today, in the five digital printing systems of the Classen Group, more than 750 print heads reliably do their job every day.

In mid-2013, the first system with the model's name Jupiter-C 2100 with 120 print heads, 4 colors and a high-precision transport system for printing on plates with a feed speed of 25 meters per minute was installed and put into operation.

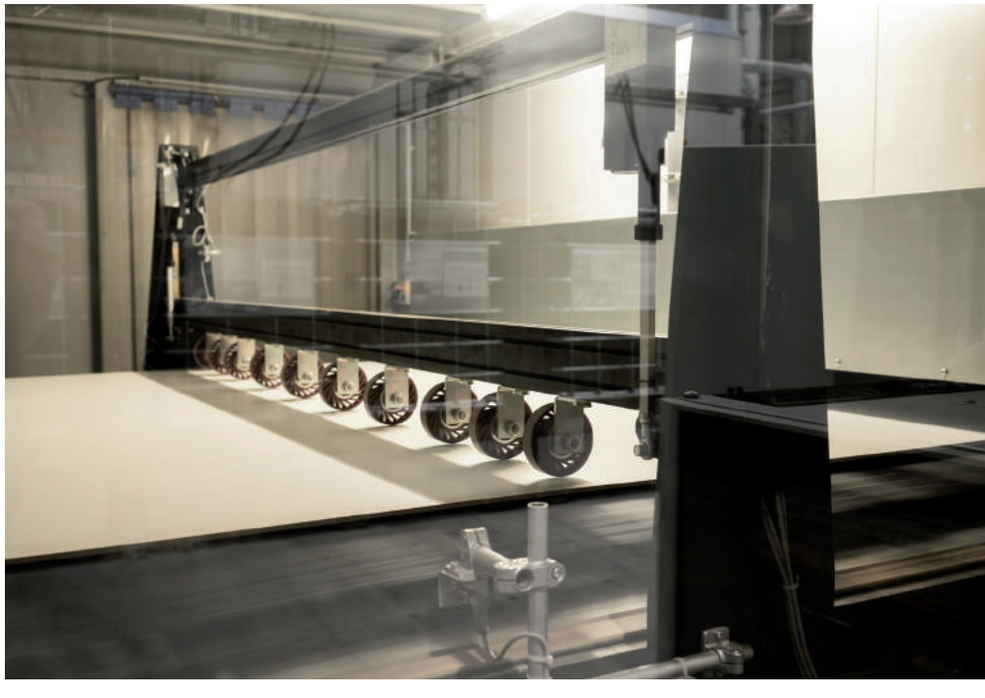
The production process for digital printing in Baruth is as follows: First, print base paper is laminated onto 5.35 m² HDF carrier boards. On top of this, Classen's own decor is printed in a single pass using the digital single-pass printing process. To protect and further shape the surface, a liquid resin is then applied in several stages, also in a single pass. Classen here also uses the LLT (Liquid Laminate Technology) process developed in-house. The same is used across the board in conventional laminate flooring production with rotogravure designs in Baruth. The board is then fed through a double-belt or short-cycle press, where corresponding all-over or synchronal structures are pressed into the surface.

On the digital printing press with a total length of 45 m, plates with a maximum width of 2040 mm can be digitally printed. At a production speed of 25 m/min, a production output of up to 50,000 m² is achieved in 24 hours.

Classen was and is also more than satisfied with the quality of the decors produced by the Hymmen digital printing system. "I actually didn't expect our digitally printed decors to look more brilliant than the ones we get from our decor printer in gravure," says Carsten Buhlmann, Managing Director of Classen Industries in Baruth. "With digital printing, we could realize exclusive designs according to customer wishes from a batch size of 500 m². Designs and variations that were not possible before can now be printed on a laminate plank. The setup times on the presses are now so short that we can also produce repeat orders at short notice without any problems," adds Daniel Schwoch. Another advantage of digital printing is that the high-quality surfaces with synchronal pores become even more precise, which means, for example, that a wood grain that can be felt by hand matches the printed, visible wood structure even more precisely.

Digital printing can also play its trump cards in terms of achieving short throughput times and meeting tight delivery deadlines. After all, printed paper no longer has to be stocked or procured at short notice. This flexibility to make immediate decisions makes an enormous difference. At the same time, order processing is now much calmer and more cost-effective.

In the meantime – 10 years after commissioning – Classen has digitally printed more than 100 million square meters of laminate



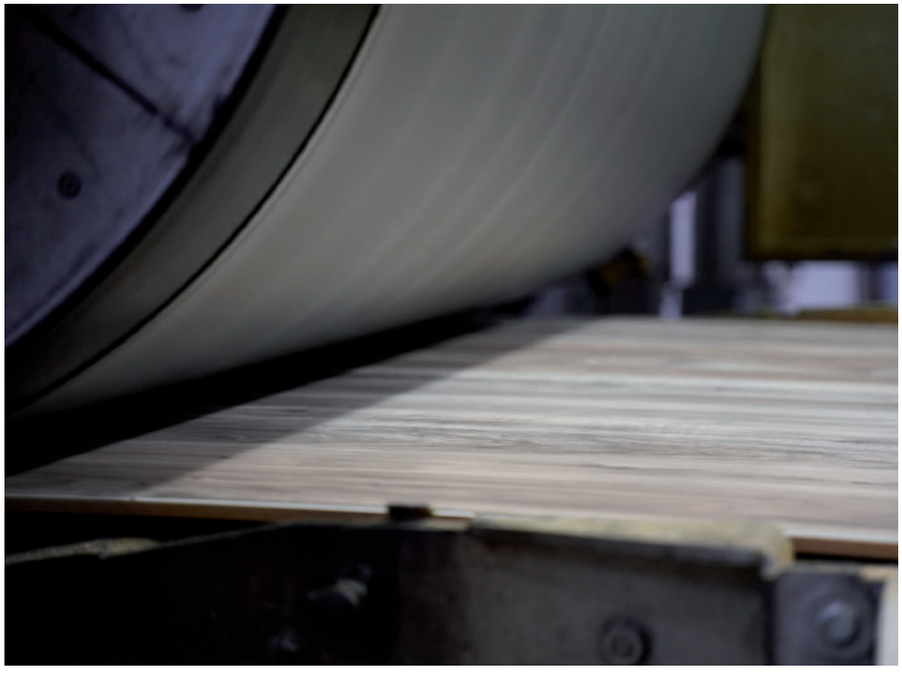
flooring with the system – that is more than 140 soccer fields. "Not only is the printing of the files, which can be up to 4 GB in size, of particular importance, but also the handling and transport of the sheets, which can be up to 5.35 m² in size, must be carried out with high precision and with the desired spacing. The special vacuum precision transport, which is over fourteen meters long, is a unique guarantee for high quality," emphasizes Brinkmeyer. A performance that only a reliable machine can deliver. And finally, it is the qualification of the operating personnel and the professional handling of the high-tech system by the employees that make this performance possible. The Classen employees can be justifiably proud of the resource-saving production process and the environmentally oriented approach, also regarding maintenance and servicing of the plant.

Even after the first decade, the technology is still state-of-the-art. This does not preclude the implementation of optimization measures even after delivery, with the help of reliable support from Hymmen.

A success story to copy

Classen excels in identifying optimization potential in flooring production in time and exploiting it. The decisive factor here is the integrated approach to optimizing the entire process chain from incoming goods to shipping logistics. The investment in digital printing technology was one of the trend-setting decisions made ten years ago. It was possible because the group management, the management of the individual Classen locations and the employees successfully pulled together. In addition, they had found the right technology partner in plant engineering in Hymmen. After a very instructive start-up phase, in which the various problems in the process and in the technology were solved together with Hymmen, the production team at Classen in Baruth had the digital printer and the printing technology safely under control by the end of 2014. It was possible to produce so cost-effectively and flexibly that a second digital press was purchased in 2015. After a run-in period of just two weeks, production with this printer two was already able to go into four-shift operation.

Infected by the success story at the Baruth production site, Classen also decided to use digital printing technology in flooring production at its Kaisersesch site. Here, the successful PVC-free CERAMIN wall and floor coverings are now decoratively printed on a width of 1,400 mm using three digital printing lines. In one line, Hymmen's Digital Lacquer Embossing (DLE) is also used for synchronous digital structuring of the surfaces.



"In five years, a future-proof flooring plant will be characterized by the fact that it realizes at least three quarters of its production via digital printing," said the Classen management in 2015, giving an indication of future plans. Even then, it was recognized that the process with the Hymmen JUPITER Digital Printing Lines was economical for so many square meters of output. Today, 8 years later, Classen's production figures confirm this hypothesis for its own group of companies: with the 5 Hymmen digital printing lines now installed, Classen produces a good 30 million square meters of PVC-free design and laminate flooring per year. In Kaisersesch, the entire flooring production is digital, and in Baruth, a good third of the laminate flooring sold is produced using digital printing technology. An order of magnitude that is unique in the world. Classen was one of the pioneers in industrial digital printing in the surface industry and will always stay on the ball and help shape the future of digital printing.

www.hymmen.com

Nature and technology in an ideal combination

At Terminal 2 of Kempegowda International Airport in Bengaluru, India, specially developed bamboo products from MOSO® contribute significantly to the overall concept, which is inspired by nature and sustainable

In November 2022, the doors of the new Kempegowda International Airport Terminal 2 in Bengaluru, India, opened to the first travelers. Designed by Skidmore, Owings & Merrill LLP (SOM), the terminal reflects India's third largest city, known as a "garden city" and capital of technological innovation. Visitors here experience nature everywhere in and around the terminal. Both the interior and exterior ceilings and columns feature innovative bamboo products developed by the Dutch manufacturer Moso International BV. In the end, the total volume of bamboo products delivered comprised 150 pieces of 40ft high cube containers, which is equivalent to about 1,000,000 length meters of round bamboo tubes. This makes the order one of the largest projects worldwide in the more than 25-year history of MOSO®. The natural, rapidly regrowing resource was processed using modern techniques into a round tube which, installed in a Lindner SE assembly system, meets all the requirements for an airport with an expected 65 million visitors per year from 2025.

An airport like a landscape

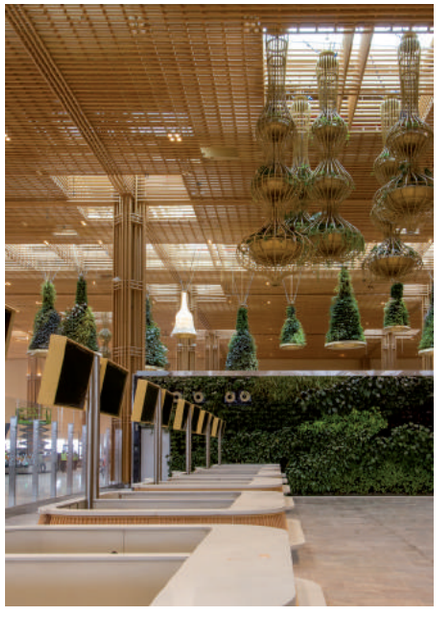
The designs of Skidmore, Owings & Merrill LLP (SOM), one of the world's leading architecture, interior design, engineering and urban planning firms, speak for themselves: the inspiration for the design of Kempegowda International Airport Terminal 2 in Bengaluru lies in nature. No matter through which entrance visitors approach the terminal, their senses are immediately stimulated by elements of nature. Plants and a waterfall create the illusion of walking through a forest and help purify the air. Materials that emphasize natural landscapes have been used throughout the terminal: The walls are made of bricks, the floors are covered with natural terrazzo and the ceiling is covered with bamboo.

"Terminal 2 will stand apart from every other airport in the world, the orchestration of every component – both natural and man-made – creates a passenger experience that we hope will set a precedent for the future of airport design." said Peter Lefkovits, Design Principal at SOM.

Specially made bamboo tubes with minimum tolerances

When MOSO® was asked to supply bamboo stems for the airport project in India at the beginning of 2017, it quickly became clear to the company that very high requirements were imposed on the durability and safety of the material. Considering the amount of material and the fact that the bamboo stems were to be used for the ceiling, the team of experts at MOSO® set about developing an alternative for the raw bamboo stems. This is because natural bamboo stems never have the same shape or quality and crack due to temperature and humidity fluctuations – a characteristic that makes it impossible to achieve the required fire protection and durability class without further processing of the material.

After an extensive research and development process, MOSO® developed laminated bamboo tubes in cooperation with partner factories in China, which the bamboo specialist recommended to planners instead of raw stems. The bamboo tubes are made from bamboo strips that are laminated into solid and hollow tubes in specially developed presses. In this way, tailor-made tubes with minimal tolerances are created. In the production process, the bamboo tubes are treated with innovative techniques to ensure they meet sustainability and safety requirements. As a partner for the in-



stallation of the project, MOSO® worked with Linder Group, Europe's leading manufacturer and fabricator of building envelopes, interior finishes and insulation, which installed these bamboo tubes in a ceiling system at the airport. In addition, MOSO® supplied bamboo tubes for the cladding of the columns.

Sustainable and ecological bamboo ceiling

For all those involved in the project, the focus is on sustainable construction techniques and sustainable natural building materials. In the process, Kempegowda International Airport aims to generate the energy needed for the entire airport from renewable sources, including significantly reducing energy consumption. The construction of a lagoon to irrigate the plants and the use of innovative glass that contributes to the indoor climate, increase the feasibility of the sustainability goals. The bamboo tubes in the airport not only enhance the natural appearance of Terminal 2 in Bengaluru, but also contribute to the project's sustainability goals. In total, no less than 2,650 tons of "Construction Stored Carbon" (CSC) will be stored in the bamboo tubes during the lifetime of the material, which is equivalent to the energy consumption of 716 average Dutch households per year (Milieucentraal, 2022). Based on a life cycle analysis according to ISO 14040/44, it can be stated that solid MOSO® bamboo products such as the bamboo tubes are CO_2 neutral despite being produced in China and transported during the product lifetime. Bamboo is recognised by architects as a sustainable building material because of it's incredible fast growth, regeneration properties, the fact that it can be harvested after only 5 years and it's capability for reforestation of degraded land.

www.moso.eu

DIEFFENBACHER collaborates in research project on MDF recycling

DIEFFENBACHER and 19 organizations from seven countries have joined forces in the EcoReFibre ("Ecological solutions for recovery of secondary materials from post-consumer fibreboards") research project to make the production of wood fiberboard such as MDF and HDF (medium-density and high-density fiberboard) more sustainable. The aim of the project is to recycle wood fibers at the end of their life cycle and use them to produce new fiberboard. Currently, fresh wood is used almost exclusively to produce wood fiberboard.

EcoReFibre kickoff meeting in Uppsala, Sweden.

The four-year project, which kicked off last year, has 12 million euros in funding from the European Union through its research and innovation funding program Horizon Europe. The project partners, which include wood-based panel manufacturers Homanit and Sonae Arauco, intend to develop and test solutions that will enable up to 25% of the fresh wood fibers used to manufacture wood fiberboards to be replaced by recycled secondary fibers. Five pilot projects will also explore how recycled wood fibers can be used to manufacture new end products such as insulation materials and biocomposites.

"More than 100 million cubic meters of wood fiberboard are produced worldwide every year – almost exclusively from fresh wood. The industry urgently needs a sustainable recycling solution here," explains Dr. Matthias Graf, who is leading the project at DIEFFENBACHER. "With the innovative technologies and business models that we'll develop as part of the EcoReFibre project, we'll take the circular economy in the MDF/HDF industry a big step forward," he says.

DIEFFENBACHER has a longstanding commitment to sustainability and preserving fresh wood resources in Europe. The company is a leader in producing equipment that uses waste wood as a raw material in the production of particleboard. The company's Recycling business unit has supplied numerous waste wood cleaning and wood recycling plants to particleboard manufacturers such as Unilin, Pfleiderer, Rheinspan and Fundermax. The project EcoReFibre will end in April 2026.

www.dieffenbacher.de

Wood briquettes are good for the environment and your wallet

When processing wood, shavings and wood residues are generated, sometimes in large quantities. This can be a valuable raw material, if it is processed into briquettes using high-quality machinery. According to Andreas Jessberger, Sales Manager at RUF Briquetting Systems, wood briquettes are a sustainable fuel for many households and an important alternative to fossil fuels. They also hold great economic potential for the timber industry and wood-working trade.

Wood briquettes are sustainable and ecological. The CO_2 released during combustion is bound again in the growing forest – it therefore circulates in a cycle.

Energy costs have been rising continuously since the beginning of 2022. Especially fossil fuels such as oil and gas are becoming permanently more expensive and are finite resources that release CO_2 during combustion. They are therefore a burden on the environment and increasingly also on the wallet of the end consumer, which makes private households in particular look for alternatives. That is why wood-burning stoves and fireplaces are being used more and more. Wood fired boiler heating systems with buffer storage and pellet heating systems are also being installed increasingly. Wood-burning stoves have an important advantage here: both logs and wood briquettes can be burned as regenerative fuels.

In Germany alone, there are now more than 10 million individual fireplaces in households and the annual consumption of wood briquettes is almost one million tonnes – and rising. Although the prices for regenerative energy sources are also rising, "on a long-term average, wood briquettes are significantly cheaper than fossil fuels," explains Andreas Jessberger and adds: "At the same time, they are sustainable and ecological, because when the wood briquettes are burned, only as much CO_2 is released as the forest binds through sustainable cultivation – the CO_2 is therefore in a cycle." Moreover, primary wood is not typically used for briquetting. Rather, wood by-products are used, as they are produced as "waste" during wood processing.

Briquetting is important for a functioning CO_2 cycle

The decisive factor here is that companies in the timber industry and the woodworking trade do not dispose of their chips arbitrarily, but rather forward them for further processing by briquetting. Even for medium-sized companies with a chip volume of 100 tonnes per year, it is worthwhile to purchase their own press, such as the RUF 100. Through the sales revenue alone, the investment pays for itself within a few years. The service life of the RUF briquette press is several times longer.

At the same time, the operation of the machines is simple. All that needs to be done is to collect the dry chips and fill them into the hopper of the press via a conveyor system. The finished wood briquettes then fall out of the machine and are usually packed manually or semi-automatically directly afterwards – usually in 10 kg packages. If the wood briquettes are packed and stacked on pallets fully automatically, RUF briquetting presses can be operated in unmanned 24/7 shifts. Only monitoring of the overall system is then necessary.

The specific pressing pressure of the RUF systems designed for wood is 1,700 kg/cm². Jessberger comments: "Thanks to the high pressure, these plants produce briquettes with such high density and strength that no binders are ever needed." A fact that makes the production process simple and cost-effective.

Wood briquettes burn with low emissions and form good embers

Wood briquettes made from uncontaminated material are ideal for the home stove and provide a pleasant and long-lasting warmth. They burn with low emissions and little ash, while also forming a good ember. Whether hardwood or softwood briquettes are burnt does not make much of a difference, because the density produced is very similar. The heating values of both types of briquettes are also almost identical and, at around 5 kWh/kg, are higher than that of logs. The decisive factor here is the briquettes' low water content of around ten percent. With air-dried logs, this can be up to 20 percent. Another advantage of the briquettes is that they require significantly less space for storage. Especially the rectangular RUF variants can be stacked perfectly in the house with minimal gaps. A pleasant side effect: wood briquettes are free of any other dirt and insects.

www.brikettieren.de

TechTogether@Hymmen in-house exhibition

Production technology and industry intelligence to experience and touch

Hymmen was delighted with the lively interest shown at the 2nd edition of the OWL-wide Tech-Together in-house exhibition event. Around 60 visitors from all over Europe took the opportunity from 18 – 20. October 2022, at the Hymmen Technical Center in Rödinghausen to see new and proven products: from digital printing technology to press and coating systems and the Industry Intelligence solution smart2i.

From Tuesday to Thursday visitors took part in exciting live demonstrations on the Digital Lacquer Embossing (DLE) line and the production systems for digital decor printing on board material with UV-curing inks (JUPITER) and water-based digital printing of decor paper (SATURN).

Next door, the HPL double belt press was waiting to press digitally printed paper into laminate on site. Hymmen's coating finishing technology (Calender Coating Inert, CCI) can produce outstanding quality mirror high gloss as well as super matt surfaces, which were also on display.

The latest of the innovations presented is equally relevant for all Hymmen-owned as well as for external machines and systems. It is the smart2i Industry Intelligence solution samrt2i, for cloud-based monitoring and analysis of all relevant process parameters to optimize the entire production. The live application of smart2i could be experienced in real time by means of the monitoring and analysis of the current production data of the technology in operation at the fair.

The practical presentations were accompanied by talks on AI and the Industry Intelligence solution smart2i from Hymmen. Carsten Brinkmeyer, Head of Business Development at Hymmen, put the Industry Intelligence solution smart2i into a larger theoretical context. Guest speaker Wilhelm Klat (M. Sc.) gave a keynote speech on artificial intelligence. Mr. Klat is a Computer Vision Specialist, a research associate of the Applied AI Working Group at the FH Bielefeld and Managing Director of CircoVision UG. Dr. René Pankoke, managing partner and CEO of Hymmen led the following podium discussion.

www.hymmen.com

Feria Hábitat València

Dates have now been announced for the next edition of Hábitat. The foremost fair for 'made in Spain' interiors, which in recent years has become established as the main international showcase for Spain's interiors industry, is set to hold its next edition at Feria Valencia from 19th to 22nd September 2023.

Taking place in the third week of September again means that Hábitat retains its strong position as one of the key events on the global circuit of fairs for this industry. The dates are well suited to manufacturers' and distributors' commercial dynamics and also mean exhibitors and visitors can enjoy the mild autumn in the highly attractive city of Valencia.

Sustained, continued growth

As it looks ahead to the 2023 event, Feria Hábitat València is riding high, with the most recent edition having outperformed its most optimistic expectations and been qualified by many as "historic", after 48,000 professionals visited and more than 600 companies exhibited. In this sense, each edition of the interiors fair has recorded growth in the region of30% since the organisers decided in 2017 to move the fair back to September after running it alongside Cevisama and Fimma-Maderalia for a few years.

www.feriahabitatvalencia.com

interzum 2023 turns the spotlight on tomorrow's green issues

"Shaping the change"

From 9 to 12 May 2023, interzum will once again launch with fresh momentum and a new slogan: "Shaping the change". What this means in practice is that the event will place even greater emphasis on key issues of the future, such as sustainability, climate protection and resource efficiency, in order to drive forward the conversation about these matters. With "neo-ecology" as the overarching central theme, the leading international trade fair for furniture production and interior design is establishing a new focus and drawing attention to its future-oriented innovative strength. After the digital interzum @home edition in 2021, the industry event will finally take place again as a live experience in Cologne's exhibition halls. Decision makers, opinion leaders, influencers and trendsetters from all over the world will gather in person to discover innovations and new products, seek inspiration and meet both established and new business contacts.

Playing a proactive role: the innovative strength of the supplier industry

Changes in our living and working environments have arguably rarely been felt as keenly as they are today. The coronavirus pandemic and its consequences, climate change and rising energy prices are presenting us with enormous challenges. Megatrends such as increasing digitalisation and individualisation and, in particular, the growing need for greater sustainability are also influencing the way we live and work.

But what will tomorrow's living spaces look like? How will furniture and interiors need to be designed in the future? At today's count, Koelnmesse, the organiser of interzum, expects approximately 1,400 companies from around 60 countries to present their groundbreaking new products, technical innovations and revolutionary material solutions to a global audience at the world's largest and most important industry event. It's here that the supplier industry demonstrates the full scope of its capacity for innovation and in doing so plays a decisive and proactive role in shaping the change.

Overarching central theme – neo-ecology: fresh inspiration for the interior design world

In keeping with its slogan, "Shaping the change. Go create conscious living spaces", interzum invites participants and visitors to find new answers to current and future design questions. In 2023, the leading international trade fair will focus on sustainability, climate protection and resource efficiency through its overarching central theme of "neo-ecology", because these topics are of decisive importance to the development of future-oriented innovations. With sustainable products and manufacturing

WOOD TAIWAN 2023

Envision a greener future showcases sustainable wood production

Co-organized by TAITRA and TWMA, WOOD TAIWAN 2023 will be held at Taipei Nangang International Exhibition Center, Hall1 from April 4 to 7, echoing the theme – Envision a Greener Future. From production to consumption, WOOD TAIWAN 2023 will showcase how wood is produced, processed, and manufactured in the woodworking machinery industry, and how it is used in a sustainable fashion on the consumer end for environmental protection and energy conservation.

The green material of the 21st century: Wood

Humans cannot live without nature, especially without wood, a natural resource that can be seen everywhere in modern-day wood products: from tables and chairs to beds, furniture and floors. Wood is not only one of the most breathable natural materials, but also one that has been around us for the longest time. As a bioresource, wood is also seen as a green material of the 21st century. As the awareness of net-zero emissions and sustainability grows, wood, one of the few carbon-negative materials, becomes an indispensable resource.

Optimizing the use of wood

According to Tu, Qin-Liang, senior consultant of TWMA, trees in primeval forests were cut down on a massive scale in recent decades, bringing destruction to primeval forests. In response to this, many countries imposed bans on cutting trees to protect woodlands. But due to market demand, many regions such as North America have started to put forward plans for large-scale plantations, an attempt to meet the needs of the woodworking industry as well as consumers by taking advantage of man-made forests. In light of this trend, woodworking machinery will play a crucial role in how to utilize such natural resources in a sustainable and effective manner.

The idea of sustainability will be embodied in WOOD TAIWAN 2023: Envision a Greener Future held in April. As a platform for the wood processing and relevant industries to showcase their finest products, WOOD TAIWAN offers various solutions to maximizing the utilization rate of wood. For example, with woodworking machinery optimizing the production line, the utilization rate increases from 30% to 90%. Not only does this approach reduce the waste of raw materials, but it also improves end products' (e.g., furniture) sustainability.

www.woodtaiwan.com

processes, many companies in the supplier industry are already fulfilling their social responsibilities. By placing an even greater emphasis on sustainable practices and discussing the issues, interzum will continue to drive the conversation forward so that new solutions can be developed together.

Hybrid trade fair experience offers inspiration galore

In order to present brand-new solutions to an international audience, the upcoming interzum will combine the benefits of a traditional in-person trade fair with those of a digital event. interzum @home in 2021 was successful in laying the foundation for this approach. In 2023, international exhibitors and experts will shine a light on the trade fair's familiar themed segments, both on-site in Cologne and in the digital space. Function & Components is dedicated to fittings, locks and built-in furniture parts as well as lighting and lighting systems, Materials & Nature revolves around pioneering materials and manufacturing techniques, while Textile & Machinery showcases the most important innovations in mattress production and upholstery materials such as fabrics and leather and explores how they fit into the concept of a circular economy.

interzum's "Shaping the change" philosophy and the overarching central theme of "neo-ecology" will also be taken up in 2023's wide-ranging event programme. Themed special events – the interzum Trend Forums – will highlight the creativity and flexibility of the furniture supplier industry in responding to the challenges of our time. The latest furniture and interior design sector topics will be presented to an international trade audience with reference to key trends. With the Product Stage and the Trend Stage, interzum offers additional opportunities for exhibitor and product presentations as well as a platform for addressing market-specific and design-related issues of the future.

Whether your target group includes decision makers from the manufacturing sector, architects, designers, contract furnishers or product developers, the range of inspiration to be found at interzum offers added value for them all. The event will unfold in hybrid form both at the physical trade fair in Cologne and in the digital space, with interzum 2023 representing continuity and change in equal measure. The customary strong on-site showcase and programme will be enhanced with attractive digital offerings, providing a unique platform on which to present forward-looking developments.

www.interzum.com

Manufacturer	Manufacturer	Products
ELKOM®	**ELKOM-Elektroheizplatten-Technik GmbH** Oberbecksener Str. 80, 32547 Bad Oeynhausen Germany Tel: +49 5731 7782-0 Fax: +49 5731 7782-12 Email: elkom@elkom.de *www.elkom.de*	**Cooling plates** **Fluid medium plates** **Heating plates** **Preheating station for solid surface and thermoplastics** **Thermoforming station for solid surface and thermoplastics** **Vacuum plates** **Vacuum tables**
GreCon	**Fagus-GreCon Greten GmbH & Co. KG** Hannoversche Str. 58, 31061 Alfeld Germany Tel: +49 5181 79-0 Fax: +49 5181 79-229 Email: marketing@fagus-grecon.com *www.fagus-grecon.com*	**Automatic woodinspection machines, scanners** **Density profile measurement** **Fire protection for industrial risks** **Measuring systems for the panel industry** **Moisture meters, in-line type for boards or veneer** **Spark extinguishing systems**
HÖCKER® POLYTECHNIK Always one idea ahead	**Höcker Polytechnik GmbH** Borgloher Str. 1, 49176 Hilter a.T.W. Germany Tel: +49 5409 405-0 Fax: +49 5409 405-595 Email: info@hpt.net *www.hoecker-polytechnik.com*	**Briquetting press** **Cyclone separator** **Dust extractor** **Industrial fan** **Paint booth**
HOLZ-HER	**HOLZ-HER GmbH** Plochinger Str. 65, 72666 Nürtingen Germany Tel: +49 7022 702-0 Fax: +49 7022 702-101 Email: kontakt@holzher.com *www.holzher.de*	**CNC machining centres** **Edgebanding** **Panel saws**
Hymmen	**Hymmen GmbH** **Maschinen- und Anlagenbau** Theodor-Hymmen-Str. 3, 33613 Bielefeld Germany Tel: +49 521 5806 0 Fax: +49 521 5806 190 Email: info@hymmen.com *www.hymmen.com*	**Industrial digital printing lines** **Lacquering and liquid coating machines** **Laminating presses** **Presses, multiopening** **Presses, continuous** **Printing machines, direct** **Service**
leitz	**Leitz GmbH & Co. KG** Leitzstr. 2, 73447 Oberkochen Germany Tel: +49 7364 950-0 Fax: +49 7364 950-662 Email: leitz@leitz.org *www.leitz.org*	**Tools and tooling systems for the processing of wood, wood-products, and plastics**

Manufacturer	Manufacturer	Products
LEUCO MAGENTIFY WOOD PROCESSING	**LEUCO Ledermann GmbH & Co. KG** Willi-Ledermann-Str. 1, 72160 Horb a. N. Germany Tel: +49 7451 93-0 Fax: +49 7541 93-270 Email: info@leuco.com *www.leuco.com*	**TC and DP tipped machine tools for processing wood, wooden and composite panels, plastics and NF-materials, tool management & service**
NESTRO®	**NESTRO Lufttechnik GmbH** Paulus-Nettelnstroth-Platz, 07619 Schkölen Germany Tel: +49 36694 41-0 Fax: +49 36694 41-260 Email: info@nestro.de *www.nestro.com*	**Briquetting Presses** **Cyclone Separators** **Extraction and Filter Systems** **Fans** **Heating Systems** **Paint Spray Walls** **PAINTLINE Paint Mist Extraction Systems** **Shredders**
HAMUEL REICHENBACHER Members of the SCHERDELgroup	**Reichenbacher Hamuel GmbH** Postfach 28, 96487 Dörfles-Esbach Germany Tel: +49 9561 599-0 Fax: +49 9561 599-199 Email: info@reichenbacher.de *www.reichenbacher.de*	**CNC-Machining centres** **CNC-Processing centres** **CNC-Routers** **Drilling systems** **Milling machines**
SPÄNEX sicher. sauber. effizient.	**SPÄNEX GmbH** **Luft-, Energie- und Umwelttechnik** Otto-Brenner-Str. 6, 37170 Uslar Germany Tel.: +49 5571 304-0 Fax: +49 5571 304-111 Email: info@spaenex.de *www.spaenex.de*	**Briquetting presses** **Dust extractors** **Exhaust filter systems** **Fans** **Heat recovery systems** **Spraying walls**
WEIMA SHREDDING + COMPRESSING	**WEIMA Maschinenbau GmbH** Bustadt 6-10, 74360 Ilsfeld Germany Tel: +49 7062 9570 0 Fax: +49 7062 9570 92 Email: info@weima.com *www.weima.com*	**Single-shaft and four-shaft shredders** **Granulators and hammermills** **Briquetting presses**
WEINIG	**Michael Weinig AG** Michael-Weinig-Str.2-4,97941Tauberbischofsheim Germany Tel: +49 9341 86-0 Fax: +49 9341 7080 Email: info@weinig.com *www.weinig.com*	**Planers and molders**

Your WiN ning team!

dihw MAGAZIN – HIGH PERFORMANCE TOOLS & PROCESSING

hp tooling – high precision tooling