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**OUR
CUSTOMER MAGAZINE FOR
THE TIMBER CONSTRUCTION
INDUSTRY**

**2026
ISSUE
#25**

IN FOCUS

TRANSFORMATION IN WOODWORKING SHOPS

ZIMMEREI HÖFLE

TIMBER CONSTRUCTION THEN AND NOW

40 YEARS OF WEINMANN

SAVE THE DATES.

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Head of Product Management at WEINMANN
Dr. Stefan Bockel
WEINMANN Holzbausystemtechnik GmbH

Dear Sir/Madam, dear timber construction professionals,

In this issue of the performance customer magazine, we take a look back on 40 years of company history. Four decades of passion and innovation played a decisive role in the first steps of prefabrication and automation in element production. Over these decades, a lot has happened in timber house construction and, of course, at WEINMANN!

We are proud to have accompanied many businesses on their journey so far and to have enabled the industry to develop further with our innovative solutions. From small carpentry firms to the highly automated prefabricated housing industry, from local German businesses in the Swabian Alb to distant companies in South Korea and Chile — as the world market leader in element production, we are a strong and reliable partner for our customers.

In this issue, we would like to focus on the ways we support our international timber construction customers, with exciting articles from France, Switzerland and England. Timber construction is developing rapidly around the world, and prefabrication and automation are already standard in many markets.

In addition, we are currently working on some global flagship projects in the field of high automation and are looking forward to sharing the latest innovations in more detail in future articles. Now that's something to get excited about!

Finally, I would like to highlight our marketing channels, where we post customer articles about key market trends and product highlights. Follow us on social media and share your news with us!

With best wishes from the Swabian Alb, and looking forward to seeing you at WEINMANN Treff on November 11/12!

Regards,
Dr. Stefan Bockel

WEINMANN TREFF 2026
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11.11. – 12.11.2026

LIGNA 2027
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Innovative strength:

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Market leader:

~30 %
world market share

A strong team:

~7.000
employees worldwide

Worldwide production:

13 factories
from global to local

Attractive solutions:

1,6 billion €
turnover worldwide

Great trust:

>100.000
customers worldwide

Innovative future:

>500
engineers worldwide

Expertise near you:

>80
locations worldwide,
through exclusive partners
or HOMAG's own sales
and service companies

Zimmerei höfle GmbH



From woodworking shops to international timber construction companies – opportunities and challenges for large-scale projects in timber construction



Stefanie and Holger Höfle
Zimmerei höfle GmbH

Timber construction is expanding into new dimensions: From single-family homes to complex large-scale projects, high standards and industrial prefabrication. Holger Höfle (Managing Director of Zimmerei höfle GmbH) has implemented this change in his own company and reports in an interview about the greatest challenges, the necessary technological steps and his experience as a pilot operation in automated façade assembly. He also explains why modular construction is a future-oriented business model for him and what opportunities he sees in it for modern timber construction.

Mr. Höfle, you have made the transition from single-family house construction to large timber construction projects. What challenges do you see in this segment?

Holger Höfle (HH): The biggest challenges clearly lie in the enormous flood

of standards and documentation. In large-scale projects, engineers deliver complete packages of fire protection, statics and requirements – you simply can't overlook anything. At the same time, work preparation often finds that planned designs cannot be assembled. Then coordination with engineers and planners begins, eating up time and delaying projects.

For example, in a school project, we temporarily stored 60 truck loads of construction beech for one year due to longstanding delays – the material alone cost 3 million euro. Such issues must be taken into account in the large-scale project business.

They have developed from the EFH segment toward large-scale projects. What does this mean for your company?

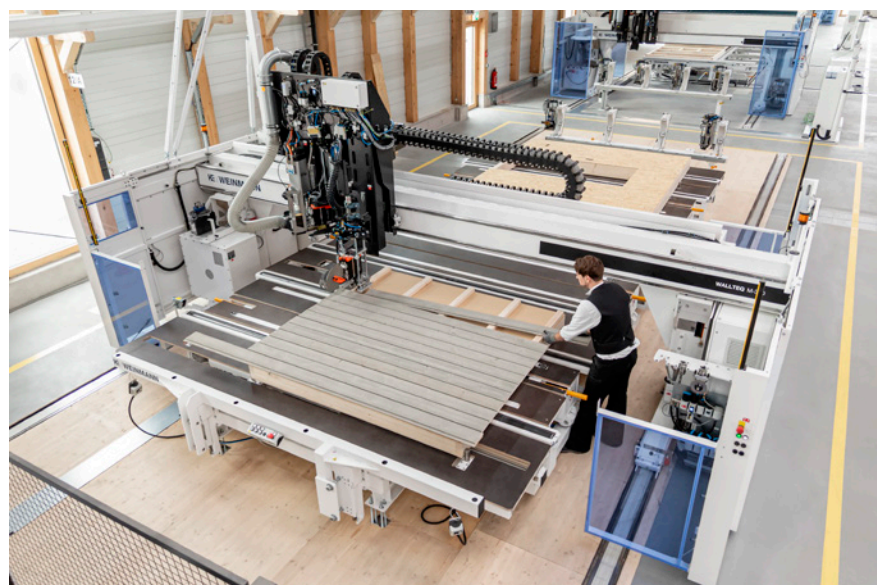
HH: Sometimes implementing a struc-

tural engineering project doesn't go to plan. However, the risk is too great for such projects to be served only occasionally. A continuous pipeline is needed to spread risks.

In addition, there are the staff. Public tenders require a different approach to cost calculation than single-family homes. 700 pages of tender documents are not unusual and the complexity must also not be underestimated. This is an entirely different work process.

Which technological developments were decisive to your transformation?

HH: We had to automate our processes to remain able to deliver at all. The introduction of our first CNC system was the first step. The WALLTEQ M-120 (multi-function bridge) was a financially manageable solution at the time.



However, with increasing façade areas, the machine reached its limits, as we wanted to apply the complete exterior formwork automatically. That's why we invested even more in 2023 and purchased a WALLTEQ M-500. This was necessary in order to be able to service large projects while maintaining a high quality.

You have participated as a pilot plant for WEINMANN in the semi-automatic façade assembly. What is your assessment so far?

HH: If the façade boards are of the same width, the automation is fantastic. At present, however, variable widths are "in fashion," which means overtime when it comes to work preparation. If the system is running, it impresses with high precision and speed.

We had a visit from a manufacturer who had previously been assembling the product manually. With an 8-meter wall, we were at around 7 minutes per square meter – this is not possible manually. In addition, we have assembled 6500 m² of façades without scaffolding in a hybrid construction and managed to achieve up to 250 m² a day. This shows the potential of automated façade processes.

In addition to efficiency, the question of quality also plays a role, right?

HH: Absolutely. The difference is clear to see especially in façade mounting: Precise bolt and nail patterns, less readjustment on the construction site and a clean overall appearance. Automation





not only improves the speed, but also the overall appearance of a project.

In your opinion, where is the current market development going in terms of construction projects and business models? Your company has expanded the market for itself and conquered modular construction.

HH: The market is clearly moving toward modular construction and system

solutions. Originally, some customers wanted to buy and install wall, base and roof elements themselves, but quickly realized that a truck load always ends up being a perfect cube.

In the meantime, we have built the first kindergarten using a modular design. It was completely finished like a single-family house at our farm, including installation and interior fittings, and later dismantled into modules and moved.

In a further two-year development process, a new residential module was created that is now ready for series production. The benefit we gain is that the modules are extremely light thanks to our prefabricated façade and the three-layer panel. This is ideal, for example, for extensions, parking lot developments or supermarkets.

Your conclusion?

HH: Large-scale projects and modular construction require extensive specialist knowledge, high investments and often strong nerves. At the same time, they open up attractive market opportunities and enable innovative solutions, especially where short construction times and low weight are crucial. We are passionate about this.



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Image, page 7, top
Images, page 8

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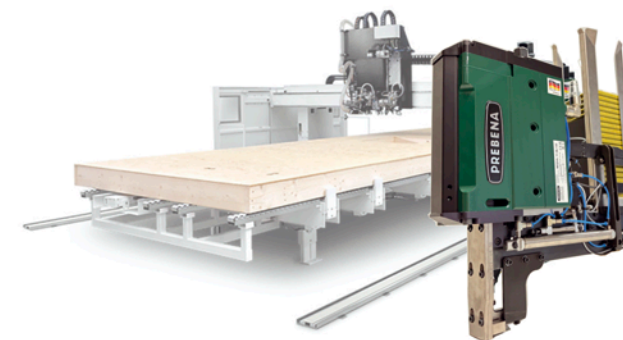
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40 years of WEINMANN

+ COMPANY HISTORY

Timber construction then and now – 40 years of WEINMANN



Hansbert Ott
Former Managing Director

It all began in 1985. Two fellow students Karl Weinmann and Alfred Schlegel make a decision that requires courage: They started their own company. The first company headquarters? A simple garage. But what emerged from there is anything but ordinary. Supported by a pioneering spirit, technical ambition and a firm belief in the future of automated production technology, they laid the foundation for a development that was to shape the industry.

SchwörerHaus KG is the first and key partner on this path. The shared history marks not only the beginning of close collaboration, but also the start of a technological breakthrough. Johannes Schwörer (Managing Director SchwörerHaus KG) and Hansbert Ott (former Managing Director WEINMANN) talk together about their shared history and the future of timber construction.

The company's history begins (1985)

Fellow students Karl Weinmann and Alfred Schlegel founded WEINMANN in 1985 and initially produced machines for a range of industries, including gardening – which has no connection to wood.



The beginnings (1987–1992)

A decisive turning point in the company's history follows in 1987: The idea of an automated machine for the production of special pallets, the so-called palletomat, began to take concrete shape. The first prototype is developed and built in the style of great tech legends in Karl Weinmann's garage.

The planned removal shows that the machine is now larger than the garage door. So it is quickly dismantled, loaded

and delivered to the first customer.

By 1993, around 150 pallet machines had been built, a great success for the startup company.

1992 saw the growth of the management team. Hansbert Ott, another fellow student, joined the company and expanded the management team.



A strong partnership is formed and with it the company's entry into timber construction (1993)

The big breakthrough was achieved in 1993. SchwörerHaus KG takes notice of WEINMANN and commissions the company to develop a wall production line for timber house construction. At that time, this was a big risk, as WEINMANN had no experience in timber house construction. Nevertheless, the three managing directors made a com-

mitment and planned the production line together with SchwörerHaus for 9 months. Ultimately, WEINMANN is successful and received the order. There are only three weeks available for the installation. The task that sounded impossible is a resounding success: After four weeks, the plant is put into operation. This was a milestone and laid the foundation for the success of WEINMANN today.

With state-of-the-art CNC technology, intelligent data exchange and consistently automated processes, WEINMANN is taking timber construction to a new level. What emerges from this is far more than an advance - it's a technological quantum leap that is changing the industry in a sustainable way. This machine is still an integral part of SchwörerHaus production. Its robust design and reliable process stability make it possible to manufacture additional houses on it year after year.

ExNorm – A global project (1996)

Another flagship project followed in 1996 with ExNorm: A fully automated production process, including cutting, production and loading. The plant becomes an international reference point – serving as a showcase project worldwide.



HOMAG invests in WEINMANN (1998)

In 1998, the HOMAG Group became aware of the company and acquired a 51 percent share of the company. This opened up a global sales network for WEINMANN with branches in more than 65 countries. This is a huge step and a challenge at the same time, as HOMAG has only been active in the furniture industry up to now and first has to acquire knowledge in the field of timber house construction.



Growth, hall construction and complete system expertise (2000–2005)

A new production hall complex is built in 2000, and the existing production building is converted into an administrative building.

The first standardized carpentry machine is built in 2001. This makes the company the first complete system supplier for the entire timber construction production process, from the control system to mechanics and service. For customers, this means a noticeable increase in comfort. In the event of questions or concerns, a single, reliable contact person is available in a simple, fast and efficient manner.

With the support of the HOMAG sales network, WEINMANN is constantly opening up further markets and countries. What began as a continuous expansion finally culminated in a remarkable milestone in 2005: the company's rise to become the global market leader.

New markets, new requirements (2008)

In Russia, 2008 marked the start of a period of intense market activity, albeit one fraught with unforeseen challenges. Instead of experienced timber construction companies, you mostly encounter investors who still have to build up their knowledge from scratch. The solution: WEINMANN accompanies customers step by step, shares the necessary expertise and helps to make complex timber construction projects possible in the



first place.

The WEINMANN Academy is born from this challenge. A unique service that accompanies customers throughout all steps of the process. It offers knowledge, orientation and practical support and makes complex processes understandable. This turns theory into real competence.

Financial crisis and change in the market (2010–2013)

The global financial crisis also affects WEINMANN and slows down investment in the timber construction industry. However, in Germany and neighboring countries in particular, many small and medium-sized businesses are starting to invest despite the uncertainty. WEINMANN responded to this by focusing on products such as the carpentry table and a modular phased program that enables entry-level automation in production and can be expanded as required in the future.

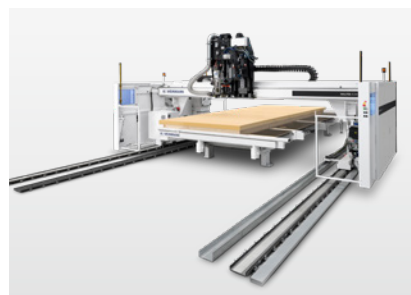
In Central Europe, the topic of modular construction gained greater focus in 2013. A concept already established in many parts of the world. However, the German market is not yet ready for this design at this point in time. But demand remains subdued, and it is only years later that modular construction develops into a major trend with growing acceptance and significance.

Robotics, standardization and efficiency leaps (2016–2017)

In 2016, robotics was introduced into timber construction. Robots support employees during heavy and repetitive

work and enable a high level of ergonomics with consistently high quality.

Another important step follows in 2017. A highly standardized generation of machines is created with the aim of reducing half the costs without compromising on performance or quality. A bold project, but one that succeeds. Standardization as the key to cost-effectiveness.



Generation change, major projects and new partnerships (2020–2023)

In 2020, Hansbert Ott, the last of the three long-standing managing directors, retires. The shareholders Karl Weinmann, Alfred Schlegel and Hansbert Ott then transferred their shares to the HOMAG Group. Since then, WEINMANN has been 100% part of the corporate group.

In 2021, the company received the order for one of the Europe's most ambitious plants. A highly automated gigafactory for the production of components for 20,000 residential units in Magdeburg.

Major corporate investment is completed in 2023. WEINMANN acquires a stake in granIT, the leading provider of MES systems – a logical step, as WEINMANN has been working on the issue

of software with software partner granIT since 1993.



Wood in its most beautiful form: The new production hall (2023)

The fourth hall bay is completed in 2023 and is completely made of wood. The warm atmosphere shows that wood is not only the building material of the future, but also creates work rooms of its own quality. A clear statement for sustainability and innovation.



40 years of WEINMANN (2025)

To celebrate its 40-year anniversary, WEINMANN can look back on impressive development: From a small garage business to the global market leader. The first major order for SchwörerHaus in the field of timber house construction was a decisive milestone on this path. This was the trigger for a success story that continues to this day and will continue in the future.

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Joining forces for success

+ SCHWÖRERHAUS KG UND WEINMANN HOLZBAUSYSTEMTECHNIK GMBH

Timber construction is changing: What trends will there be in the field of timber construction in the future?



Johannes Schwörer
Managing Director
SchwörerHaus KG

Shortage of skilled workers is driving the shift to production

Fewer and fewer people are willing to work on construction sites for weeks away from their place of residence. This shortage of skilled workers is hitting the construction industry hard and forcing companies to industrialize their processes. Instead of weather-dependent work on the construction site, prefabrication in the plant is increasing. Automated processes, protection against weather and better working conditions ensure a higher quality of the end products there.

Modular construction has become a global trend. In Asia and North America, complete buildings have long been built in the plant, which are merely assembled on the construction site. This serial production enables:

- Short construction times
- High quality of execution

- Fewer staff requirements
- Low-costs

Timber construction is ideal, because it allows precise prefabrication, short drying times and flexible design.

Building upward and renovating existing buildings

As building land is becoming scarce and the daily consumption of land is subject to strict political limits, there is no alternative to multi-story construction. Wood not only offers ecological benefits, but also impresses with its low weight and fast assembly – perfect for urban construction.

At the same time, a gigantic task awaits. 19 million buildings in Germany were built before 1979 and have the highest energy consumption. If climate targets are to be achieved, these houses must undergo energy-efficient renovations. Prefabrication is the key to this: Old façades, including balconies, recesses or complex geometries, can be modernized quickly with prefabricated wood parts.

Automatization and robotics are transforming timber construction

Production in timber construction is becoming increasingly industrialized. New plants, digital control systems and flexible robotics will enable production processes that are reminiscent of the automotive industry, but adapted to the wide range of construction variants. Robots no longer work behind safety fences, but increasingly collaboratively as "colleagues" alongside specialists.

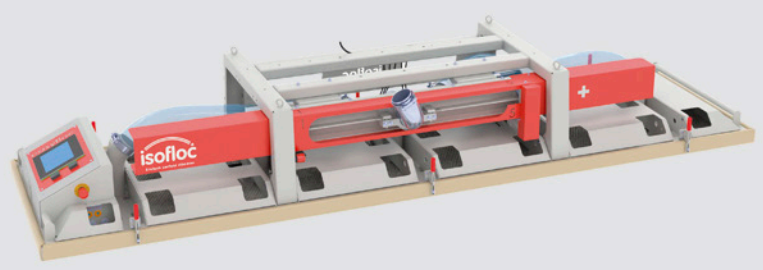
Automation reduces costs and material usage

As material costs account for around 80% of the construction costs, there is enormous potential for savings in standardization. Reducing the number of variants, such as window types, connectors, or component sizes, minimizes waste, simplifies planning, and makes production more efficient. The art lies in designing architecture within clear guidelines without losing design quality.

Four decades after the courageous beginnings in a garage, it is clear that WEINMANN has not only shaped timber construction, but has also actively led it into a new era. From the first pallet machines to highly automated production systems, the desire to make timber construction more efficient, precise and accessible was always the focus.

Today, the industry is once again facing change: a shortage of skilled workers, growing demand for urban housing, energy-efficient renovation and the call for sustainable building demand new answers. The solution lies in prefabrication, modularization, robotics and intelligent standardization – precisely the topics that WEINMANN has been promoting for years.

With four decades of experience, a clear mandate for the future emerges: to think ahead, to rethink, and to move forward. Timber construction has the potential to fundamentally change house construction, and WEINMANN will continue to be a driving force for this transformation in the years to come.



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SCAN FOR ALL TOOLS



14, 15, 16 GAUGE STAPLERS

KYOCERA FASTENING SOLUTIONS

WEINMANN product news

+ OUR HIGHLIGHTS

A closer look at our product highlights



Dr. Stefan Bockel
Head of Product Management
WEINMANN
Holzbausystemtechnik GmbH

New in element production: The BUILDTEQ A-400

Efficient entry into modern light-weight construction production

With the BUILDTEQ A-400 series, WEINMANN is launching a new generation of production tables that has been specially designed for the requirements of lightweight production. The BUILDTEQ A-400 is at the heart of modern production lines for open timber frame elements. The new solution is suitable for carpenters and element suppliers, as well as for prefabricated house manufacturers, and impresses with an optimal price-performance ratio. Compared to the next-highest model series, the BUILDTEQ A-400 offers a significant cost advantage without compromising on essential functions.

Versatile and robust

Elements weighing up to two tons can be processed on the production table, and a wide range of different element sizes can be produced – from a compact 2 x 2.4 meters to a generous 12 x 3.8 meters. Thanks to its modular design, the BUILDTEQ A-400 can be flexibly adapted to individual production requirements. Whether manual or line-integrated automated transport, different table lengths or a sophisticated clamping system, the machine offers maximum flexibility and precision.



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- ✓ Alternative to solid wood supports
- ✓ Hybrid product made from timber and OSB
- ✓ Reduced thermal bridge thanks to soft fibrewood insulation in the cavity

More information:
to.egger.link/ecobox

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Particularly noteworthy is the innovative clamping system for clamping in the X and Y directions, which ensures that the elements are perfectly perpendicular and significantly reduces the need for manual reworking. When the clamps are released, they are lowered under the table surface, which increases the operating comfort and prevents collisions. An optional beam aligner also ensures the correct alignment of the studs and minimizes the risk of "shiner" nails penetrating the back of the element – a plus for quality and efficiency.

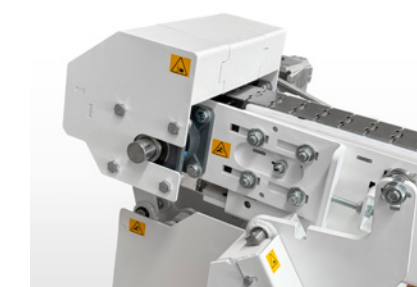
Simple operation

Depending on the version, the BUILDTEQ A-400 can either be operated conveniently using a hand lever or via a modern control unit that is integrated into the production flow, which enables up to six tables to be combined. The transport system that can be adapted to the

element width and the pneumatically lowerable X stop ensure that the elements are transported safely and smoothly to the next workstation.

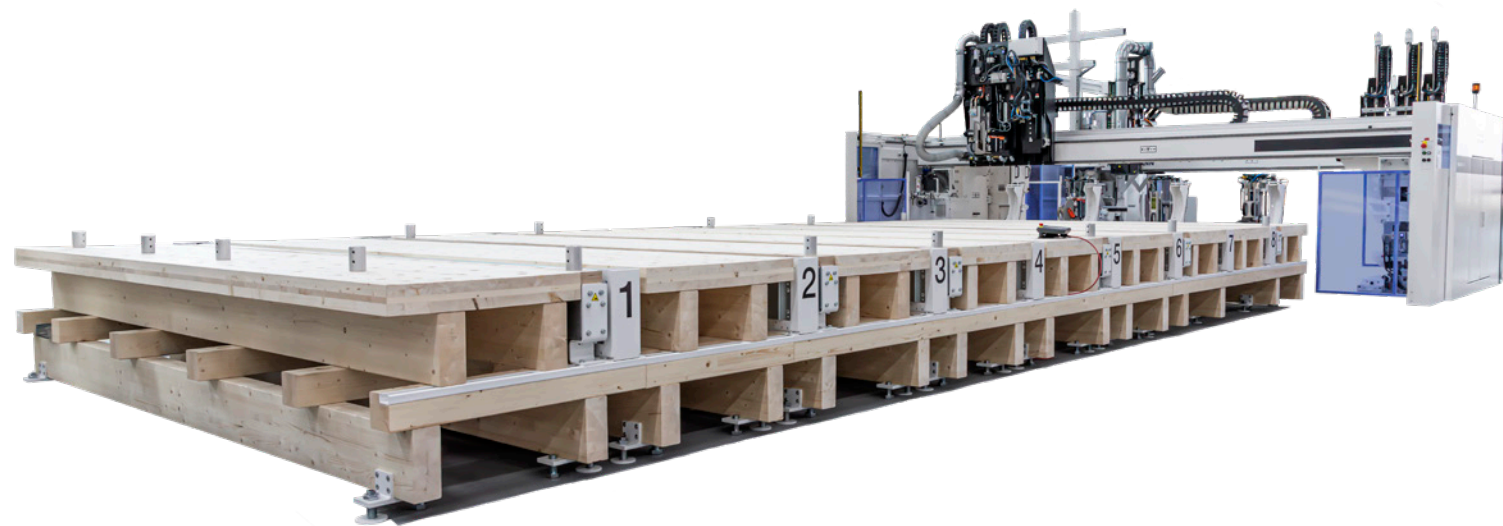
Ready for the future

In terms of future-proofing, the new table solution is also convincing: it can be expanded in a modular way and can be expanded to a highly automated production line with additional machines from the WEINMANN portfolio. WEINMANN is thus setting new standards for economical and efficient production in the growing lightweight construction segment. The BUILDTEQ A-400 is an investment in the future – for companies that rely on quality, process reliability and economic efficiency.



Discover the
BUILDTEQ A-400





New in element production: The BUILDTEQ A-200

Modularity and flexibility for element production

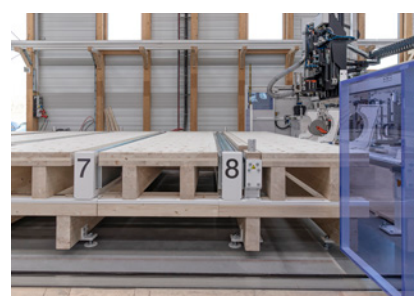
With the new BUILDTEQ A-200, WEINMANN is presenting an innovative and highly flexible assembly table solution for timber construction, tailored specifically to small and medium-sized enterprises, right through to industrial companies. The system impresses with its modular design, individual configuration and easy integration into production lines.

Customized design options

Whether pneumatic clamping systems, transport modules, electromechanical turning modules or simply installation modules – each technical module can be combined and retrofitted according to customer requirements. The tabletop can be designed with a hole pattern, bore holes and niches, providing optimal access and an ideal ergonomic working method.

Efficient and synchronous without hydraulics

The electromechanical turning system is a special highlight of the BUILDTEQ A-200. Unlike conventional hydraulic solutions, this system works completely without hydraulic oil and is therefore particularly low-maintenance and environmentally friendly. The elements are turned safely and precisely using synchronized and electromechanical drives, which not only saves space, but also guarantees a fast and efficient turning process.



TIMBER CONSTRUCTION LOGISTICS A STEP AHEAD X-SW 300 WITH XP-BDF



Intuitive operation and flexible integration

The control system of the BUILDTEQ A-200 is based on the latest wupWorks 5 software and is controlled via a user-friendly touchscreen control panel. The mobile operating devices enable direct control of individual modules and entire table segments. The segmented control units are attached to each table

section and ensure a permanent view of the production processes.

Suitable for every production environment

The new assembly table also enables integration into existing and future production lines and compatibility with other WEINMANN products such as the WALLTEQ. With the BUILDTEQ A-200,

WEINMANN presents a solution that grows with the requirements and integrates optimally into modern production environments — a real benefit for timber construction.

Go to the
BUILDTEQ A-200

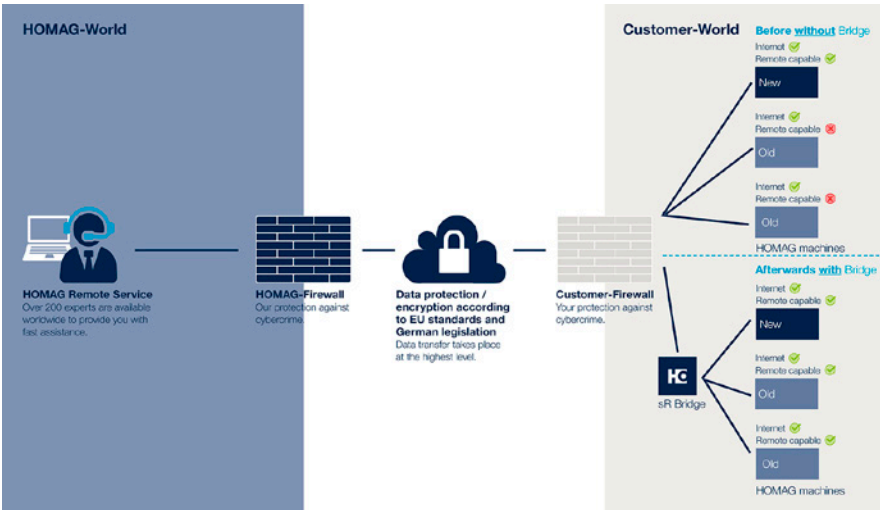




ServiceRemote Bridge — sR Bridge

The serviceRemote Bridge raises HOMAG's Remote Service to state-of-the-art level by completely decoupling access from the machine. Instead of connecting each machine individually, the bridge acts as a central access point in the customer network. This means that HOMAG can keep the remote connection and the software used up-to-date, regardless of the machine's age, without having to intervene directly on the machine. This architecture not only ensures stable and up-to-date connection technology, but also significantly reduces installation costs: For an entire customer network, only one bridge is required, via which all HOMAG machines in this network can be connected. Even older models up to operating system versions such as Windows NT can still be securely integrated into the remote service.

With the serviceRemote Bridge, companies receive a future-proof, centrally maintained remote infrastructure that reduces diagnostics times, stabilizes connections and reliably supports service quality regardless of the machine's age or status.



Secure remote services with sR Bridge – the next step in the networked future

With the sR Bridge, HOMAG relies on a modern, future-proof solution for remote access to machines and plants. This is due to the increasing demand for IT security as well as new legal requirements such as the Cyber Resilience Act. Traditional remote connections can no longer reliably meet these requirements.

The sR Bridge offers a technological leap forward in this respect: it enables highly secure VPN communication, meets current IT compliance standards and ensures encrypted, traceable remote access. For machine operators, this also means more protection and more transparency – without compromising on service quality.

- With the introduction of sR Bridge, companies benefit from:
- Future-proof technology for long-term



thly, efficiently and in accordance with the highest security standards – an essential component for modern production processes.



- machine availability
- Modern security architecture with clear access policies
- Two-factor authentication for controlled access
- Faster and more reliable support from the HOMAG service team
- Stable VPN connections even in complex IT environments

The changeover is now being implemented step by step for the machines concerned. This ensures that remote service will continue to function smoo-

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- ▶ Full insulation material flexibility
- ▶ For all production layouts

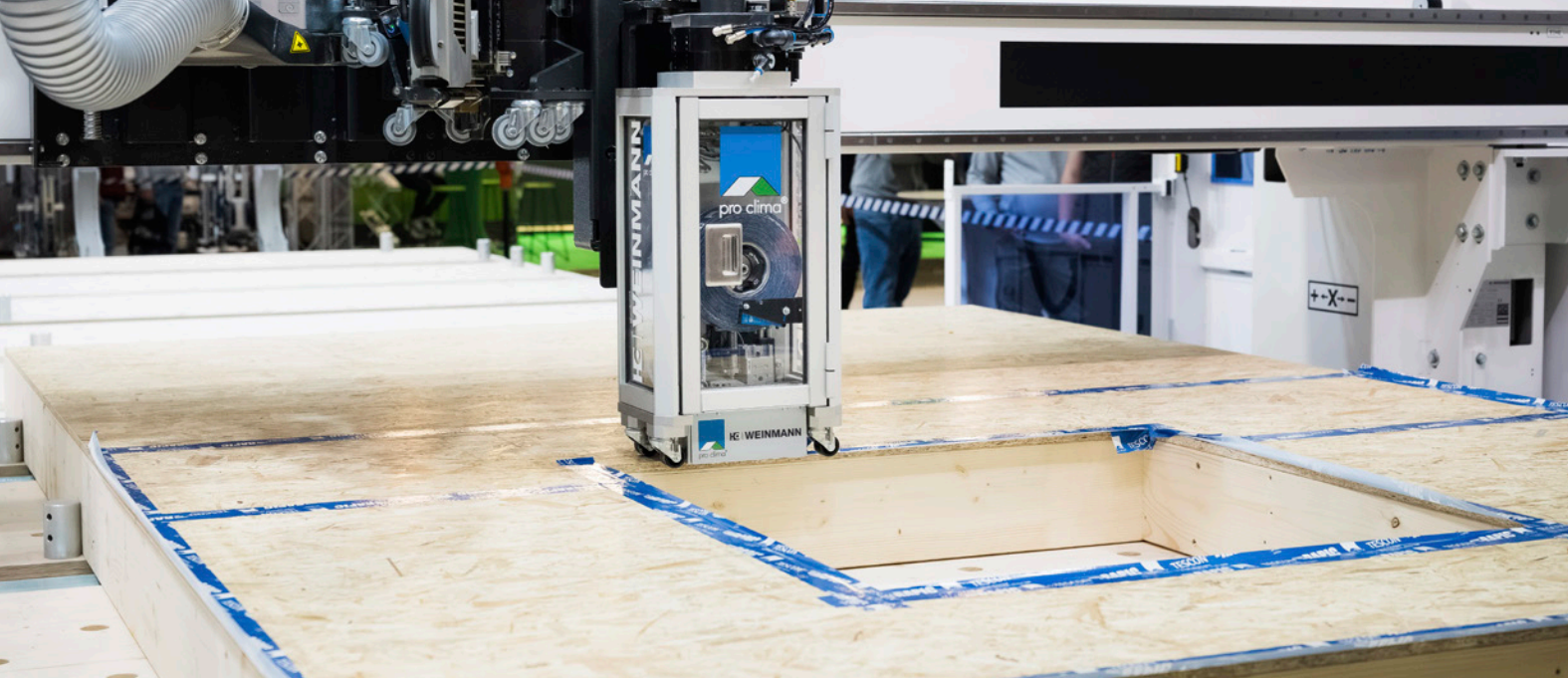
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- ▶ Precise process control
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- ▶ Designed for continuous operation

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- ▶ Minimal hill formation
- ▶ Dust-free filling
- ▶ 24/7 remote access

patent protected



The RAPICMASTER sets new standards in element production

Is applying sealing tape by hand a fiddly and rather unergonomic task, with the risk of getting splinters in your hands? This is now a thing of the past.

The RAPICMASTER automatically applies sealing tape at relevant points and presses it precisely onto the element. This eliminates the need for time-consuming manual application and significantly reduces the workload for the employee. In addition, the application saves a significant amount of time thanks to the multifunction bridge, allowing the carpenter to get on with other tasks in the meantime.

Using the multifunction bridge and fastenerSwitch, the RAPICMASTER can be easily fitted with a new roll. The roll used covers 100 running meters and can

usually operate several elements. When the RAPICMASTER is set to standby, it can be easily accessed and quickly fitted with a new roll in just 1–2 minutes.

RAPICMASTER is a joint development with pro clima – MOLL bauökologische Produkte GmbH, making it perfectly suited to work in conjunction with Tescon® Raptic adhesive tape.



The RAPICMASTER can be included in the configuration for new plants and is also available as a modernization set for existing plants.



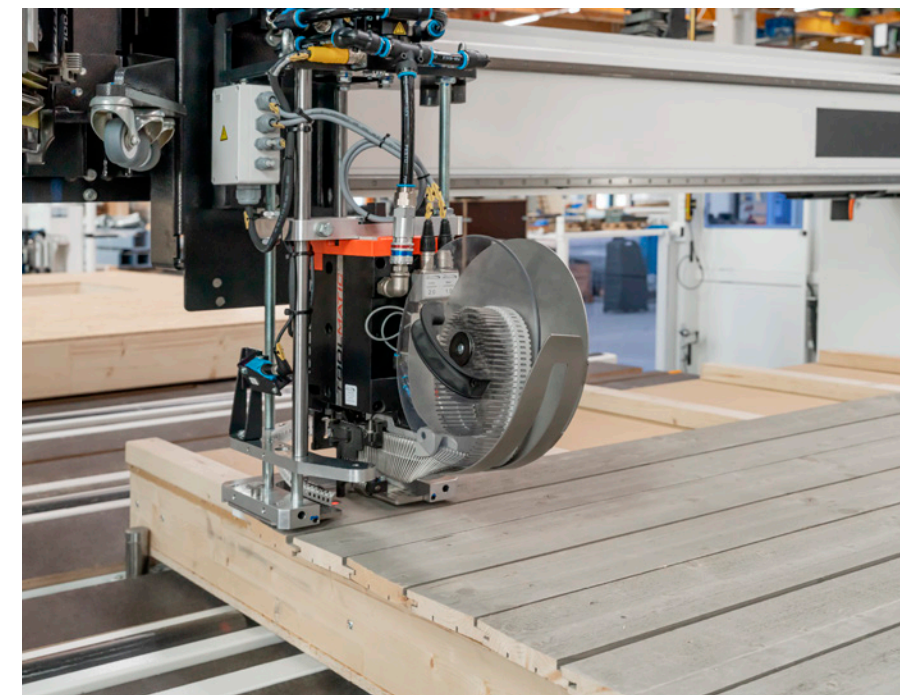
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Mounting façades semi-automatically: Façade shoe for the WALLTEQ multifunction bridge

The growing trend toward wooden façades is becoming an increasing concern for timber construction companies due to the high level of manual labor involved. In combination with the WALLTEQ multifunction bridge, WEINMANN has developed a façade shoe that enables semi-automatic mounting of different façade types. This saves the trouble of marking out and fixing the panels by hand on site and, above all, avoids costly reworking, particularly if the wooden façade extends over several stories. The façade shoe can be used to attach tongue and groove façades, as well as base covers and Z-profile cladding semi-automatically.

NEW (!) Solutions for the installation of open jointed cladding, rhombus cladding and the concealed fastening of shuttering boards are now also available.



Discover
the façade shoe!



booa

+ CUSTOMER REPORT

Automation of individual timber frame construction



"We've never built the same house twice"

booa is a timber construction company that specializes in the production of tailor-made single-family houses in timber frame construction. Since its foundation some fifteen years ago, it has systematically developed from a craft-based business to a company with an industrial production structure. The fact that booa is able to seamlessly combine bespoke architecture with efficient mass production today is a key requirement in WEINMANN's automated production technology.

Automation in timber house construction is associated with a fundamental structural change in the construction industry. The combination of industrial prefabrication, digitalization and automated handling systems leads to more efficient, high-quality and sustainable construction processes. Off-site construction in particular is becoming increasingly important as it moves far-reaching production steps from the construction

site to controlled production environments. The use of artificial intelligence and the increasing integration of digital systems are not only accelerating this development; they are also opening up entirely new possibilities. In addition, alongside technological development there has been a growing trend toward the standardization of construction processes: to enable industrial series production, building components are being modularized and systematized. Architectural variability is certainly retained when digital planning methods and automated production systems are aligned to individual adaptations. Key to this is the integration of machines, software, and intralogistics, which enables seamless information flows, allowing changes to the digital model to be directly implemented in production data and enabling efficient control and moni-

toring of production processes. Artificial intelligence is increasingly being used to optimize production processes or material flows.

Standardized in high quality

booa, based in Châtenois, Alsace, may be considered a prime example of such processes. Part of the Burger et Cie group of companies, single-family houses in timber frame construction are the company's trademark. booa's business model is based on the consistent implementation of individual customer wishes, with each building being designed as a custom-made product – often with a double-shell façade, always with excellent insulation. As Production Manager Sébastien Dolder emphasizes: "We've never built the same house twice." "And it's already 2000 units." In

addition, the company has been strategically expanding its portfolio in recent years in parallel with single-family homes. Commercial buildings, modular buildings such as multi-story apartment apartments and prefabricated façade systems for steel constructions are the key diversification that booa uses to respond to changing market conditions.

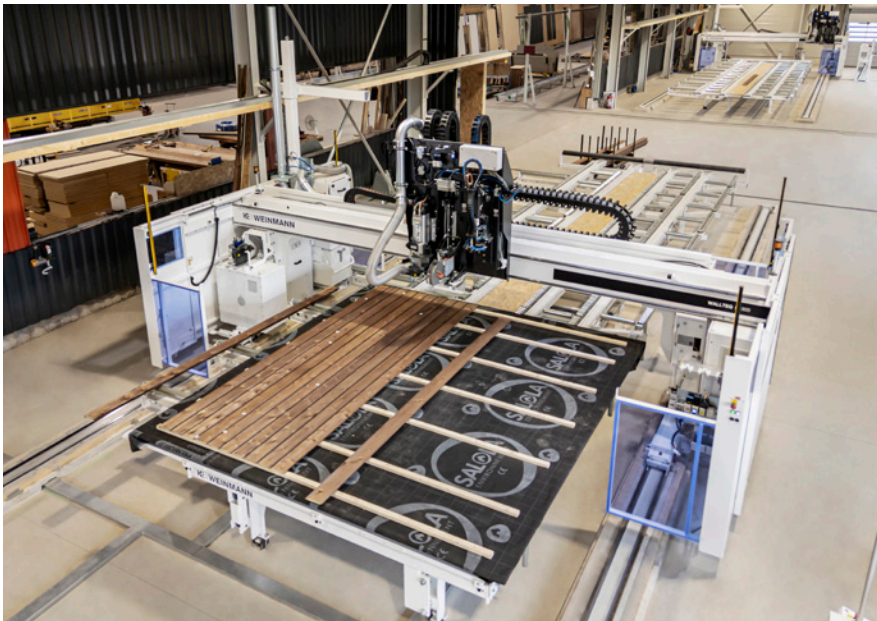
Step by step...

Central to booa's success is the extensive automation of production, since it enables the high degree of individualization. Even complex and customer-specific planned components are manufactured with consistent efficiency and high levels of prefabrication. And regardless of the degree of individualization, production times remain the same. "We went down this path right after the company was founded," says Dolder. "In 2011, for example, an investment was made in a first combi wall system from WEINMANN's "FRAMTEQ" series. Since then, frame works have been produced automatically and planked with OSB panels."

To expand production, two further combi wall systems were brought into the building in 2018. Work also began that same year on further increasing production: among other things, an existing hall was converted to house a new beam processing unit. "Since this unit was commissioned in 2022, a STORETEQ H-700 gantry storage system has automatically supplied two BEAMTEQ B-660 carpentry machines with material, whereby the WEINMANN software

"wupWorks" controls the machines and the storage system, monitors the material stocks and optimizes the cutting process," says the production manager.

In 2023, WEINMANN then delivered a compact system consisting of two "BUILDTEQ A-500" turning tables and a "WALLTEQ M-500" multifunction bridge. The purpose of this facility is to ma-





nufacture floor and ceiling elements, as well as components for booa's three-dimensional living containers. The plant is therefore designed primarily for the production of components with specific geometries and designs.

"We made our most recent investment in 2025 to modernize our wall production," explains Dolder. "In addition to several 'BUILDTEQ A-500' tables, these also included two 'WALLTEQ M-500 insuFill' blow-in bridges, a 'WALLTEQ M-500' processing bridge for the pro-

duction of visible internal sides and two 'WALLTEQ M-300.' While these bridges enable the application and processing of wooden façades by means of a façade shoe, booa has integrated the blow-in bridges to meet the growing importance of bio-based insulation. The semi-automatic façade mounting using a façade shoe is a new development from WEINMANN that enables exact alignment of the façade boards, high ergonomics and a further increase in the level of prefabrication.

Highly automated production

booa now sees their machine park as complete. Of course, replacement investments may be required in due course, but the current manufacturing concept allows the automatic manufacture of any kind of custom-made equipment and the matching of the machines to any element size, thickness or cladding. In the first step, the material is transported from an external storage facility to the STORETEQ storage facility, which then automatically supplies the two BEAMTEQ machines for cutting. There are two possible routes at the end of the carpentry machines. While the horizontal elements are being produced on the compact production line, the wall panels are being manufactured on

two FRAMETEQ M-500 machines in a neighboring building. "Once the substructures have been installed, we fix the bracing panel in place here, fit the rain screen, install the battens or fix wood fiber insulation, which will later be plastered on site," explains Dolder.

The wall is then rotated and move to one of the two blow-in bridges. Here, either wood shavings or cellulose are blown in fully automatically, which for booa means complete, waste-free insulation with reduced work effort. "On the bridges, we can also automatically attach the vapor block and attach inner cladding made of wooden slats," explains the workshop manager. "We then move the elements to the WALLTEQ M-500, which can be used to attach interior paneling made of gypsum boards, Fermacell or wood as an alternative." For the final automation step, the wall is rotated one last time and the exterior paneling is automatically attached. Finally, the wall leads to joinery lines to install windows and doors and seal them all around. "At the same time, we are using a "CENTATEQ N-210" nesting system from HOMAG to prepare all required HPL panels so that they can be attached to the walls on a designated table as quickly as possible," explains Dolder. "The system prepares all the panels for



us so that we can attach them to the wall immediately without having to redrill or recut." On the day of assembly, the elements are therefore always available and loaded onto lorries on time.

The focus is on the planning phase

In addition to the direct production processes, automation in Chatenois also has an impact on ergonomic aspects. The machines have taken on tasks such as cutting insulating materials or align ing façade strips, which previously had to be carried out manually. This

has not only made working conditions easier for employees, but has also led to a sustained increase in efficiency. Despite the high degree of automation, technical planning remains a key challenge, as the optimization of design processes and their seamless integration into production are crucial for the processes. "Our entire design software has developed around WEINMANN," Dolder emphasizes. "Everything we design today can be exported to the entire machine range without questioning our way of designing and exporting our files from the design office to production."

For the next optimizations, booa plans to further digitize and automate the planning phase. If the company had chosen WEINMANN for the machines, primarily because of their quality and robustness, as well as their proximity to the service partner, the expertise of the machine manufacturer in digitalization will play an even greater role in the future. "We don't know today how and in which direction our products will develop in detail," says Dolder. "But we know that our machines are highly adaptable. Regardless of the market development, they can be adapted to other production processes and structures thanks to automation and digitalization. We are absolutely sure of that."

Access the video here



UEDING Group

+ CUSTOMER REPORT

Rapid growth in difficult times



In about four years, the UEDING Group in Billerbeck made the transition from single-family house construction to general contractor for large-scale projects.

For many timber construction companies, the slump in single-family house construction has become a catalyst for rapid growth in new business areas. Many of them subsequently underwent a structural change at a rate that had previously been considered impossible. This change was primarily concerned with the optimization and digitalization of all processes in the company in the timber construction industry, as well as the provision of new production capacities, which were usually accompanied by an automation process.

However, the change didn't come entirely out of the blue: the importance of commercial construction for timber construction had been apparent for several years. This is why many companies had already gained initial experience with larger properties in parallel with the construction of single-family homes. This versatility proved to be of benefit during the construction crisis. It allowed

them to switch quickly to commercial construction, an area in which many companies from the industrial prefabricated construction sector found it considerably more difficult to operate due to their specialization in the large-scale construction of detached houses.

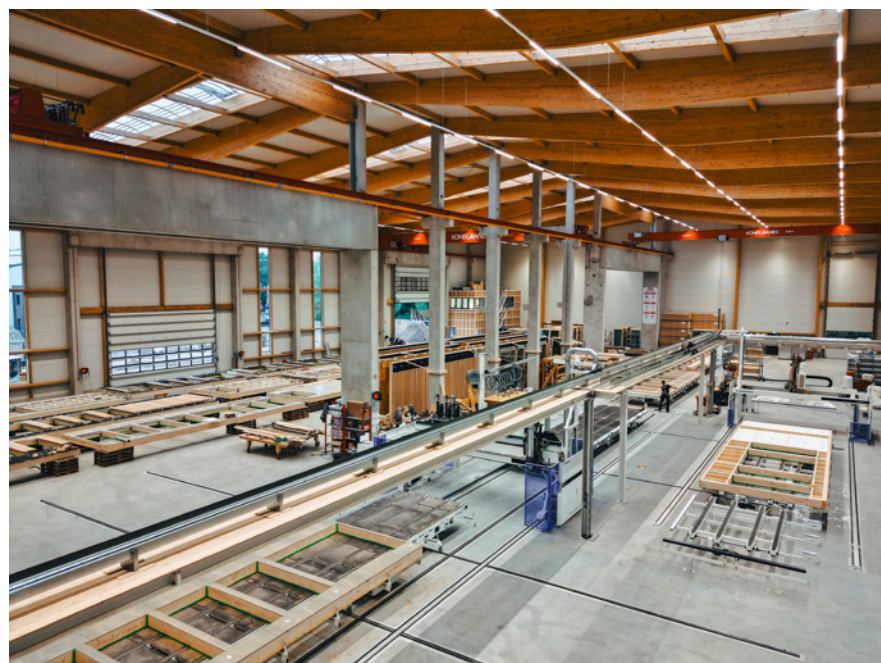
New drivers of growth thanks to the new property

A good example of this development is the UEDING Group in Billerbeck, North Rhine-Westphalia, which was awarded the prize for the "fastest-growing medium-sized company" in the "Construction and Architecture" category by the SZ Institute, the digital think tank of Süddeutsche Verlag, in 2026. Out of 9307 businesses across various sectors throughout Germany, UEDING ranks an impressive 22nd in the top 30.

Founded in 1983 by Dieter and Wilhelm

Ueding as a classic carpentry firm, the company started building detached houses in 2015 after the founding sons – Manuel and Sebastian Ueding – joined the company. In the years that followed, the carpentry business had diversified into two parts: while UEDING GmbH acted as a classic carpentry and roofing company, UEDING Wohnbau GmbH, founded in 2019, took over the business of building turnkey single-family houses using timber-frame elements, carrying out up to 40 projects a year at its peak.

When this business sector plunged into recession in 2023, it had already set the first course for a year in the direction of commercial construction: "From this point of view, we were well prepared for the crisis and have been in contact with WEINMANN since 2021 to expand our capacities by automating our production processes," recalls Managing Director Manuel Ueding. At that time,



the focus was still primarily on building single-family houses. The new production line was planned for the existing hall, in which only one compact system was possible due to space constraints.

The company's scope for growth was therefore limited, and would have remained so had a neighbor not put their plot of land up for sale while negotiations with WEINMANN were still ongoing. The management of the UEDING Group saw a unique opportunity, secured the plot and canceled the order with the machinery manufacturer – which, to the satisfaction of Manuel Ueding, who at the time was already managing director of the company alongside his cousin Sebastian, "wasn't a problem, even though we had already ordered some of the machinery."

UEDING built a 4000 m² hall on the new plot, in which a modern production fa-

cility was installed in collaboration with WEINMANN. In parallel with the start of operations, UEDING Modulbau GmbH was established in 2024 as a new member of the group. From then on, it took over all operations in the rapidly growing prefabricated and modular construction sector and supplies the other subsidiaries with timber-frame elements.

Well equipped for new construction tasks

In negotiations with WEINMANN, expanding capacity was at the top of the list of investment targets. Optimization of the cost structure ranked second for Manuel Ueding: "An investment like this must ultimately pay for itself, which means that we need to become faster and produce more in the same amount of time. Our business plan has been fully implemented in this regard: we are now more efficient and can produce signifi-

cantly more timber-frame elements at the same cost and in the same time. This is also helped by the fact that we optimized our processes in 2022 through lean management – which was only possible because we intensively involved our employees in this process." The aim of automation was also to ensure the well-being of employees: more ergonomics at the workplace was another important investment objective – from which not only the staff at the work table benefited, but also the company itself, because it increases its attractiveness in the labor market. A very noteworthy point, since the UEDING Group has grown from 15 to around 100 employees since 2015. For Manuel Ueding, this is only possible "because we have done something for our employees, and ergonomics at the workplace and the modernization of work processes are part of this." This leaves the issue of quality. For Manuel Ueding, it played a minor role in the beginning, "because our products have always been extremely high quality. However, with an increase in the number of units, it would have become questionable whether we could have maintained this high standard. In this case, there was practically no alternative to automation."

Production Manager Chris Wöstmann adds that "the fault tolerance of the plant is clearly lower at high quantities. And we have to supply these quantities today, because our construction tasks have become significantly larger and the lead times are sometimes extremely short. With our old infrastructure, we could not have met these requirements.



Highly prefabricated elements

Looking at the new infrastructure, it becomes clear that the hall and production line provide the company with completely new options in object and module construction.

Timber frame elements are produced in one half of the hall, which is roughly divided into two sections. Depending on the nature of the order, some panels are pre-assembled; the beams, processed by a carpentry machine in the old hall, are delivered to a storage area next to the first table.

The latter is the first station in a WEINMANN four-table line with a turning option on which the timber frame elements are manufactured step by step in accordance with the familiar diagram. A flexibly configurable WALLTEQ M-500 multifunction bridge with 12-slot tool changer processes the panels, while a WALLTEQ M-300 insuFill processes the fully automatic blow-in of the insulation. In theory, the system is also suitable for the production of ceiling elements,

but these are typically purchased from Ueding in the form of cross-laminated timber components.

Table 4 can move sideways out of the line. This means that the elements reach an area that is below the first floor of the hall. Façade construction takes place here – on flexible roller stands, which enable the elements to be transported further by hand. Almost all wooden façades are assembled. Their grid is marked by the WALLTEQ M-500 to minimize the effort required for calibration. There is hardly any demand for plaster façades and even for clinkers that are popular in the north – a development that points to a significant boost in the reputation of timber construction, which has gained rapid market share in the north in recent years as well.

Installation of the windows also takes place in this area – in a horizontal position, as this means the components do not need to be stood upright and sorted into the racking. Production Manager Chris Wöstmann sees "a broad trend among colleagues here, and suppliers

are also increasingly offering suitable systems. We have just completed a project with 250 windows and were so satisfied that installation in a horizontal position will probably become standard for us – usually after the façade has been completed."

The level of prefabrication at the work table has also increased significantly in other areas, such as sanitary, heating and electrical installations or in the production of modular wet rooms, in view of the higher requirements in multi-story construction.

A development that also demands new capacities in the company's CAD planning, because according to Chris Wöstmann "orders have not only become more numerous and larger, but also more complex and detailed." Work preparation is one of the departments expanding within the company. It has already increased its staff from four to six, and is still looking to expand. This is all the more true as the order backlog in modular construction is constantly increasing.

Modules as the market of the future

For the latter, the company uses the remaining area of its new hall, which can be expanded by removing the flexible roller stands during peak orders. Modules are seen as a business area with a future, although according to managing director Manuel Ueding, they also want to remain flexible here: "We offer both types of construction, combining them depending on the construction task. Elements are more individual and flexible in some areas, while on the other hand a modular building is faster – provided that it is planned in a modular manner by the architect."

The company has many options in terms of module production: the new hall, which is equipped with underfloor heating, has sufficient space to accom-

modate all subcontractor work, with the modules remaining in the hall while the carpenters move around.

With a ceiling height of 12–16 m, it is also possible to stack two modules on top of each other and raise a third one with the two available bridge cranes. This means that finished modules can be removed from the production line at any time via two side doors: bottle necks or jams in module production, which are often a troublesome problem when entering this business area, are not an issue in Billerbeck.

Zero-emission buildings in the Hafency

Today, multi-story and modular construction make up the lion's share of the UEDING Group's activities. The number of single-family homes has decreased



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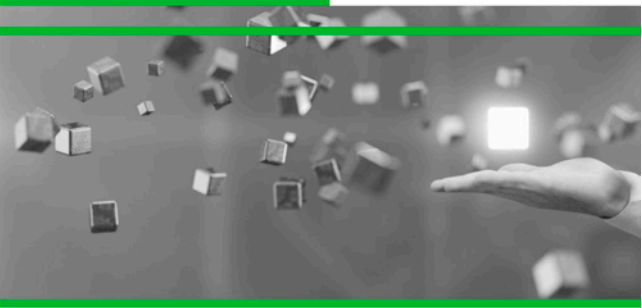
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significantly, while the large-scale projects, which include KITAS, school buildings, office buildings and multi-family houses for public, commercial and private clients, handle up to 20 projects a year. UEDING Modulbau GmbH prefers to act as a general contractor, taking on all tasks relating to a project right up to the development of the neighborhood.

Here Manuel Ueding sees 'significant market potential, and I'm pleased that we are able to cater to this sector. It is important to be able to combine many sub-sections such as element production, window construction or dry construction in such a general contractor project and thus prepare them in the hall. Synergy effects can be used to reduce costs and increase quality. We then work with subcontractors for interior fitting. The trend in this area is toward ever larger projects. For example, we are currently working on a 100-meter-long zero-emission building in Hamburg's Hafencity, where investment is in the double-digit million range."

This company's current flagship project is a six-story building with a massive first floor and five wooden floors above it. It is to become one of the most sustainable buildings in Europe: the wooden floors are certified according to the Cradle to Cradle principle, making them fully recyclable; the façades are greened and equipped with an integrated irrigation system and a photovoltaic system.

UEDING had the window, façade, steel component and roofing trades in its order portfolio, which enabled the company to achieve a high level of prefabrication. No modules were delivered, but elements.

**Further development
already in mind**

Nevertheless, the order backlog in modular construction is currently growing so rapidly that Production Manager Chris Wöstmann is already thinking about a rail system for module transport.

Modernization of the old hall is also already under consideration. In future, special components and elements that delay the workflow on the line due to many manual work steps could be produced on a single-station turning table outside cycle times.

WEINMANN is also the go-to partner in this area and has already made some excellent suggestions to Chris Wöstmann. "But we're still holding back a bit at the moment. In view of the rapid upheavals in recent years, it is important for us to pause and breathe." – This will probably not take a long time. Then the company, which in its own words: "We are far from reaching our goal," is likely to contact the machine manufacturer from Lonsingen again to initiate the next round of modernization.



BISANG Holzbau AG

+ CUSTOMER REPORT

Customized solution



BISANG Holzbau AG in Küsnacht am Rigi, Switzerland, combined CNC panel processing with manual element production to modernize its production. This enabled it to open up new business areas and optimize the processing of existing ones.

Production automation in small-scale timber construction companies continues to make rapid progress. This shows that, given the great diversity of products and the flexibility of the business areas, there is no one-size-fits-all solution for everyone in this field. It is therefore important to develop the optimum level of modernization for every company – even if the result may be surprising at first glance.

All areas covered

At BISANG Holzbau AG, for example, the list of business areas reads like a who's who of the carpentry industry. The services offered range from roof window installation to carports and wooden terraces to renovations, single-family homes and large multi-story projects. Another important area of business of the company, which is based

in Küsnacht am Rigi, Switzerland, is contract beam processing, which currently accounts for 10 percent of sales and is expected to grow in the next few years.

Modernization in the company's beam processing hall is the reason for this future growth. It was one of the most important measures initiated by Raffaele Kunz and Silvio Teuffer to further develop the company that has existed since 1952. They joined the Board of Management in 2013 and 2018, and have been joint owners of BISANG Holzbau AG 2021.

"We had thought about how we could remain competitive and better position ourselves for the future" says Raffaele Kunz in retrospect: "That's why we looked at various solutions from different manufacturers and also included a WEINMANN production line with multifunction bridge in our deliberations."

However, the structural conditions at

Küsnacht proved to be a hindrance: production was carried out in a 19m-high hall on two levels, with beam processing on the first floor and element production on the upper floor. At the bottom, there was too little space for a multi-table production line, and at the top the structural analysis of the hall put a spanner in the works of the two business owners. This was all the more true given that space wasn't exactly plentiful here either.

Moreover, given their exceptionally broad product portfolio, this solution seemed too specialized for both of them: "Such a production line would only have helped us in element production, but we also earn good money in other areas," explains Raffaele Kunz. In particular, he has in mind the contract beam processing carried out in three-shift operation, which was previously limited to bar-shaped wooden components.

From this perspective, the managing



Combining panel cutting with WEINMANN production line "Assess performance gains in advance"

At BISANG AG, the increase in capacity due to CNC panel processing is primarily due to manual processing in element production. Thanks to cutting, there is no need for setup and working times for calibration on the table; the work steps around the sheathing are limited to placing and securing the plate layout. This means that automated cutting inevitably leads to an increase in performance.

Even if element production takes place on an automated WEINMANN production line, a HOMAG CNC panel processing center can also increase performance. In this case, however, it is important to calculate the performance increase precisely. It should be noted, for example, that combining panel processing with automated element production is not cost-effective for low quantities. For larger quantities, it is important to carefully assess the minimum quantity and level of processing

complexity at which this approach becomes viable.

Jörg Groß, head of the project department at WEINMANN, is well aware of examples where retrofitting automated panel processing enabled significant increases in performance: "As soon as the customer's performance requirements cause the processing time of a multifunction bridge to limit its performance, an additional panel cut is recommended." This could be the case, for example, in multi-story construction, if large quantities of elements have to be delivered to the construction site permanently or during peak orders in a short time window.

However, as the profitability calculation must include not only the quantity, but also the complexity of the processing, possible waste reductions through nesting and the individual framework conditions of the company concerned, it is not possible to make a general statement about the benefits of an automated panel processing center.

Jörg Groß therefore recommends individual consulting for interested parties, in the course of which

WEINMANN determines exactly which cycle time is to be sought in view of the company's performance requirements and to what extent it makes sense to invest in a panel processing center: "We leave all processing steps on the multifunction bridge as long as possible, because this avoids additional investments."

To further refine its consulting criteria, WEINMANN has currently commissioned a research project in which the unprocessed panel sizes in particular are more closely included in the calculation to develop a reliable decision matrix for or against panel cutting. "If this project shows that automatic panel cutting pays off sooner when using larger panel formats, this could be an opportunity for us to get involved in the topic earlier in consultations." This is perhaps all the more true if an automated panel storage system is also planned, as this would afford the company greater flexibility in terms of materials and make it easier to store and transport large formats.

director felt it was useful to cancel automated element production and invest in panel cutting: "This allows us to expand our beam processing operations to new customers and business areas at the lower end of the process, while making element production at the upper end faster and more precise through the

use of pre-assembled panels. This means that we have covered all business areas with the investment."

Expanded portfolio

As a result, the two business owners explored the possibilities for panel cut-

ting, and a HOMAG CENTATEQ N-600 emerged relatively quickly as the solution of choice. For Raffaele Kunz, the main advantages of this CNC panel processing center lie in its fast 5-axis processing capabilities and professional nesting for optimized cutting. This reduces the error rate and material



costs (the latter due to less waste), while increasing precision and production capacity in comparison to manual processing. As the material yield increases and fewer materials are cut, productivity increases even further.

With the STORETEQ P-500, BISANG Holzbau AG also ordered an automatic storage system that is suitable for the panel processing center. The storage system optimizes the material flow, manages the stock levels transparently and, thanks to optimal utilization of the

panel processing center, provides the company with a further increase in efficiency and flexibility. Up to six types of panels are kept in stock in Küssnacht to allow for quick changes, including façade panels, with which the company is currently gaining its first – and positive – experience in pre-cutting.

This already indicates that BISANG Holzbau AG will also expand its product portfolio with the new technology. Another area of focus, for example, is the production of concrete formwork, which had previously been attempted manually without achieving a satisfactory balance between the manual effort involved and the results.

In this area, the CENTATEQ N-600 reduces costs for Raffaele Kunz, enabling the company to operate more effectively on the market by leveraging pricing flexibility: "We sell primarily through professional advice and expertise, but now we

have become more competitive thanks to better prices. This is how we are currently opening up a new business area that would probably not have established itself using the old method."

The same applies to professional panel cutting, which is increasingly being offered to its own suppliers: "Many of them do not have such a machine in the company. That's why they send us the raw material for processing and then collect it again to deliver it to timber construction clients on site. We see a wide range of opportunities here, and the suppliers act as highly efficient multipliers for our company."

Explore & develop

For the time being, however, the company is still holding back on marketing. For Raffaele Kunz, this is a wise decision, "because we are still exploring, developing and making better use of the possibilities offered by the technology acquired in May 2025. Every day, we are faced with interesting tasks, be it that we have to make fine adjustments and detail adjustments to produce more quickly and more precisely, or that we find that many of our suppliers have panel dimensions that are too inaccurate and that the panels are not exactly level. But that's precisely what's important, because we work with a vacuum table that has problems with panels that are under considerable tension."

Learning and professional development are also a priority in work preparation, a department that was already operating at a very high professional standard even before the new technology was introduced. However, a number of new issues have now arisen which we have not yet had the opportunity to deal with. This includes the new machine and interface software, which requires some familiarization; however, as Raffaele Kunz points out: "Fortunately, we can rely on dedicated staff who are keen to







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get to grips with it."

Professional nesting was also a new issue in the company, and one that took some getting used to. Raffaele Kunz still sees the ramp-up time for the new technology as positive: "There were also points that we had to clarify with HOMAG. This includes, for example, that the vacuum table should be retrofitted with a few additional vacuum pumps to meet our requirements. However, our local contact provides us with excellent support and offers us solutions when it comes to such matters."

Worthwhile investment

One of many reasons why, from today's perspective, the company's modernization plan appears to be a complete success. This is also the case in timber construction, where capacity in element production has increased as planned since the staff no longer have to measure and cut the sheathing at the tables. "In addition to increasing capacity, we

also optimized our processes according to the principles of lean management a few years ago," Raffaele Kunz adds. For large projects with high element requirements and a short time window, this manual work area is currently proving to be a bottleneck. This could be addressed by implementing a two-shift operation, but it is more likely that the company would cooperate with colleagues on such projects, as this would also distribute the financial risk among several parties.

For Raffaele Kunz, the investment objectives of reducing costs and improving quality have also been definitively achieved in this and other areas of the business. "Today, we manufacture more quickly at the same cost, but with greater precision, which is particularly noted by our business customers. Precision and, consequently, the quality of the components have also improved on the element tables, even though they were already of a very high standard.

At the same time, workplace ergonomics improves at the tables, as the dust exposure from sawing and trimming is eliminated and the pre-assembled panels only need to be placed and secured. The company has invested in panel lifters to make this task easier. "Interestingly, this was an improvement that we

had to convince our employees of first."

The hoists have now been installed. In Raffaele Kunz's view, these modern technical aids not only improve "the quality of life for our employees, who no longer go home completely exhausted in the evening. They also pay off for us through greater efficiency and employee motivation. We can also retain older employees with their experience for longer in the company and become more attractive to young people on the job market.

This also applies to panel cutting, where as soon as the learning process has ended and marketing has started, a two-shift operation is already being considered. The panel processing center will then open up new business areas for the company, while at the same time significantly optimizing the existing ones. So it's an investment that has paid off at all levels.



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**Just-in-Time
Manufacturing for a Homebuilder**

Oregon Timber Frame Ltd. is a prime example of current developments in the timber construction market. Founded in 1998 in Selkirk, in southern Scotland, the company was acquired by Barrat Redrow PLC in 2019. This is one of the leading homebuilders in the United Kingdom, whose group includes three house brands for different market segments—Redrow, David Wilson, and Barrat Homes.

Oregon's role within the group is the prefabrication of timber-frame houses. Since the change in ownership, significantly higher production volumes have

been required, so in 2023 the group replaced its manual production facility in Derby, central England, with a new plant equipped with a largely automated production line from WEINMANN.

For Operations Director Jason Powell, it's a logical step: "I think the demand for housing and the skilled labor shortage in Great Britain mean that prefabrication is the solution of choice for building the required number of houses. The demand for housing is enormous. We can only meet it through automation and the construction of additional production facilities." A second manufacturing facility has also been automated in Selkirk.

The company currently supplies up to 60 building sites a week from Derby using a just-in-time production system that ends directly at the vehicles; according to Jason Powell, these include "very large sites with up to 500 units, where the brands David Wilson and

Barrat Homes are represented. However, there are also smaller sites with just 50 or 100 homes. It depends on the local circumstances."

First step towards closed elements

Production in Derby takes place on three production lines: In line 1, fed by a HOMAG SAWTEQ series panel saw and two joinery machines, eight BUILDTEQ worktables, customized by WEINMANN to the customer's specific requirements, are lined up. Ceiling elements are manufactured manually on these worktables, then placed on a WEINMANN-specific storage area at each worktable, picked up by forklift, and transported to the loading station.

Lines 2 and 3 are used for the production of wall elements. A finger-jointing line is installed upstream, in which the top and bottom flanges are glued continuously and roughly cut to length.



WEINMANN proposes this solution when only a small number of different cross-sections are used in element production. Jörg Groß, Head of Global Solution Engineering: "Since finger jointing allows for the recycling of offcuts, we achieve an outstanding reduction in waste to 3-4 percent."

From the finger jointing system, the bottom and top chords are conveyed to the two production lines, where, after a glue drying time of approximately 20 minutes, they are fed, along with the pre-fabricated studs purchased from other suppliers, via an automated feeding system to the respective FRAMETEQ frame assembly station. There, they are precisely cut to size during the frame assembly process. Window and door modules are pre-produced at two parallel stations and continuously integrated into the frame assembly. For better orientation, the installation position of the window and door modules is displayed to the operator on a screen at this workstation.

Lines 2 and 3 differ primarily in the number of workstations. Both primarily enable the production of wall elements that are closed on one side. The latter still constitute the majority of orders for construction projects in the UK.

In both production lines, a quality control table is located behind the frame assembly station. This is followed by two tables for placing the panels, which can also be used as buffers, and a table with a WALLTEQ M-500 multifunction bridge for fastening and processing





the sheathing. The WALLTEQ M-500 is equipped with parallel nailing units for rapid nailing. Two further tables, on which the elements are fitted with an external moisture barrier and prepared for loading, mark the end of the production line.

Line 3 additionally enables the production of closed wall elements. For this purpose, it is supplemented behind the WALLTEQ multifunction bridge by a turning table, which transfers elements to another line as needed. Here, they are insulated, closed, and processed with a second multifunction bridge. According to Steve Seath, Head of Production Integration, closed wall elements now account for approximately 25 percent of

the production volume.

Roof elements are not manufactured on any of the production lines: For the attic, which is rarely used as living space, construction companies in the UK purchase nail plate trusses locally. For Jason Powell, this is not only because it is more cost-effective, but also to reduce the carbon footprint of their own products through shorter transport routes: "As a company, we are aiming for carbon neutrality by 2030. The use of wood enables us to achieve this goal." The target for the construction site is "to erect a building within one day and make it weatherproof. This allows all other trades to work efficiently afterward." In addition to the roof, Oregon

subcontracts windows, doors, interior finishing, and also the brick cladding popular in the UK to local companies.

Tailor-made concept and seamless commissioning

According to Jason Powell, a key objective of the automation was to significantly increase the group's production capacity: "We planned to accelerate the element throughput per line to 1.2 m/min in order to be able to build approximately 4,000 houses per year in Derby." Steve Seath adds: "This is only possible with a smooth linear manufacturing process. We discussed the corresponding requirements with several machine manufacturers in advance, and WEIN-



MANN made the best impression on us due to its experience. During the planning discussions, we received tailor-made proposals for the equipment of the new plant – not too much, not too little, they recommended exactly what we needed."

Since the company developed clear concepts for the hall layout and implementation in dialogue with the machine manufacturer, the new plant, whose buildings were completed in November 2022, seamlessly commenced operations in May 2023. Looking back, Steve Seath sees the commissioning process as "a very smooth process overall, with few problems with the machines."

One of the reasons for this smooth start was the preparatory training provided by WEINMANN, which took place partly in St. Johann-Lonsingen and partly on-site in Derby. This was supplemented by several weeks of production support to familiarize the Oregon employees with the new technology.

"Even after that, the HOMAG Group was always available by phone," recalls Steve Seath. Support for his company was largely handled by HOMAG UK, the group's sales and service organization in the United Kingdom, which is closely networked with WEINMANN. Here, they provided on-site support to Oregon for the next steps in automated production. Steve Seath: "Today, we practically

have no more problems, so enquires to WEINMANN are no longer necessary."

Strong Competition in the Job Market

One of the biggest challenges in Derby proved to be recruitment: "It took us about a year and a half to reach our current staff of 150 employees," recalls Jason Powell. This was primarily because Oregon Timber Frame faces powerful competition in the job market at its Derby location, including companies like Rolls-Royce, Toyota, and major aerospace firms.

Most of these competitors operate with a high degree of automation. Producti-



on automation by WEINMANN, which offers employees significant ergonomic benefits, therefore gave Oregon a strong advantage in the job market: “Many of our employees live in the region and were familiar with automation in the automotive industry,” explains Jason Powell. “Initially, they assumed they would have to manufacture wooden houses using hand tools at workbenches. Our high degree of automation and the efficient processes, which create attractive jobs, pleasantly surprised them.” Since word got around, it has become easier to find workers.

Even the employees who were transferred from the previous manual production on-site have readily accepted WEINMANN's new production lines after some initial hesitation. As a result, there are now enough experienced colleagues to train new employees and support them during the initial phase of their new roles.

The production throughput targeted in the planning phase has not only been achieved but has already exceeded. And, just as importantly for Jason Powell, “Thanks to automation, we have achieved absolute planning certainty in terms of capacity, precision, and quality. This allows the plant to plan better and deliver more consistently week after week. Our partnership with WEINMANN has therefore been very successful, and we are very satisfied with the plant.”

A positive conclusion, which Steve Seath also agrees with: “I have several years of experience with WEINMANN products, and the machine manufacturer would always be my first choice if I had to equip a company with a new production line.”

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Dijkhof Bouw

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Timber construction in the Netherlands



Dennis Dijkhof
Managing Director Dijkhof Bouw

Solutions to ease the pressure on the housing market

Dijkhof Bouw is a traditional Dutch construction company that has invested in automated technologies for timber construction over the last few years, based on growing demand for sustainable construction and increasing efficiency and quality. WEINMANN remains our partner for our machinery to this day.

The housing market in the Netherlands is under severe pressure. Around 1,000,000 new apartments are set to be built in the next ten years, which works out at 100,000 units a year. A project that makes current approval procedures, regional bottlenecks in power supply and the lack of skilled workers even more challenging. An important approach to solving the problem lies in prefabricated construction. In any case, today's building industry in the Netherlands is strongly influenced by innovation, sustainability and the need

to find efficient solutions to address the lack of housing. For years, the industry has been shifting toward sustainable construction, high levels of prefabrication and energy-self-sufficient concepts. The use of natural materials such as wood, hemp, cellulose and flax is also increasing significantly. In the insulation sector, petrochemical foams are being replaced by bio-based materials – not least to better regulate the moisture in buildings. Because the buildings are designed according to the principles of circular economy, materials can be reused after their first phase of life. At the same time, large residential projects are increasingly relying on load-bearing structures made of wood, such as CLT (cross-laminated timber) and HRB (wood frame construction). Tiny houses and compact housing designs are also becoming increasingly popular. Last but not least, building information modeling and artificial intelligence are increasingly

being used to optimize planning right through to material use and to optimize time.

Specifications are aimed at sustainability and energy efficiency

All of this takes place against the background of a Dutch building industry traditionally characterized by masonry. Current regulations, however, such as the Building Code and Environmental Law, which are regarded as target-oriented, flexible and highly digitalized, prioritize sustainability and energy efficiency. Today, most construction projects require a comprehensive environmental permit that combines construction, planning and environmental aspects. For example, strict energy requirements have been in place since 2015, and materials must meet strict sustainability criteria. At the same time, building regulations set out the fundamental objectives but often le-

ave it up to the client to decide on the technical implementation. In addition, every construction project must comply with strict nitrogen emission regulations. The fact that these can be implemented more easily with the timber construction projects is also due to the high level of prefabrication and the resulting reduction in transport.

Recognizing the signs of time

Dijkhof Bouw, based in Klarenbeek, and its subsidiary Dijkhof Houtbouw in Lieren, also operate in this complex framework of conditions. As the original traditional "village builder," the company now operates in three segments: residential renovation, restoration of listed buildings such as farms, churches and castles, and residential construction. Until 2015, Dijkhof Bouw, a company that has existed for 101 years, was a regional all-rounder. From that year onwards, however, it began to specialize in renovation, restoration and residential construction through separate departments. From 2018 onwards, Dijkhof Bouw has been manufacturing wooden windows for its own use and for third parties. Prefabricated wood elements have been in the portfolio since 2024. "Since then, we have been working with a hybrid construction system in which all components are delivered prefabricated from the first floor ceiling," reports Dennis Dijkhof, second-generation managing director. "The aim is to switch completely to timber construction by 2026/2027. By the middle of 2025, the proportion of complete timber buildings had already increased, so that we are



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efficiently with a certain degree of individualization, the production facility in Lieren underwent a complete overhaul in 2024. Until that point, the building contractor had not manufactured any prefabricated wall and ceiling elements itself, but had sourced them entirely from external suppliers. The construction system was also designed differently at that time. "In light of changes to the legal framework and the increasing shortage of skilled workers, we were looking for a future-proof solution in timber construction. At the same time, we wanted to gain more control over quality, delivery times and individualization," says Dijkhof. "The aim was to use automated CNC technology to produce more quickly, increase quality and reduce the number of personnel required."

There were clear reasons why the company chose WEINMANN. "WEINMANN has presented us with a compact, multifunctional solution that is perfectly suited to our company and enables the planned customer-specific adaptations," emphasizes Dijkhof. "Above all, WEINMANN thought about the entire production process in an integrated way and presented an overall solution." The production line therefore consists of a "BEAMTEQ B-660" carpentry machine, a compact system with two "BUILDTEQ" work tables, in combination with a "FEEDTEQ H-300" vacuum lifter and a "WALLTEQ M-500" multifunction bridge. Whilst the multifunction bridge enables both the blowing-in of cellulose insulation and the formatting and fastening of the elements, the second table can move the finished element towards the storage area. It is also important to note that the plant, which went into operation in 2024, is operated entirely via battery storage due to network bottlenecks.

The production process in Lieren now encompasses everything from CAD design and the transfer of digital data to the workshop, through automated timber processing – including the assembly of elements with cellulose insulation

– right through to the final finishing. The projects are developed in the BIM software "Vertex BD." From there, drawings and export data for costing, purchasing and storage are generated. The data is then transferred to the ERP system, after which work preparation draws up a digital plan for the project. No paper is used at the workplace. Beam processing for a project is usually carried out one week before the work on the WALLTEQ. Finished elements are temporarily stored in an interim storage facility of the STOCKTEQ series or placed directly on loading areas for transport.

Excellence for comprehensive solutions

"Getting started in timber manufacturing was a completely new process for us, and one that presented significant challenges." In comparison to the conventional construction method with sand-lime stone and concrete floors, this is simply a completely different way

of working," begins Dijkhof in his conclusion. "However, the investment and cooperation with WEINMANN enabled us to transition from traditional building to timber construction in a short period of time." Today, Dijkhof operates an efficient production process that produces high-quality elements with a few employees. "It's not just the equipment that makes WEINMANN such a key player: we also received comprehensive support with the planning, installation and commissioning, particularly when it came to adapting the concept to the existing infrastructure," Dijkhof adds. "The collaboration was very productive, with a focus on open communication, problem-solving skills and a comprehensive solution that was suitable for us." The training courses were also very useful. Both staff and management have completed several of these at WEINMANN. In September 2025, new employees were also trained on site. "We continue to benefit from this kind of support in terms of service and



maintenance. Reliable support ensures short downtimes, among other things," says Dijkhof. "We also regularly consult WEINMANN to implement our ongoing process optimization. We see optimization opportunities primarily in the Vertex machine control unit. In addition, the order book already includes major projects involving houses built entirely using timber construction."

Capacity expansions already being considered

Based on the current production capacity of 70 residential units, Dijkhof is now aiming for an increase to around 120 units per year. The WEINMANN concept is also designed for this production output. To increase capacity even further, the contractor is already considering extending the plant to include a third assembly table. The Dutch housing market will then simply be the beneficiary of such capacity expansions. Based on a future-oriented partnership between WEINMANN and Dijkhof, which stands for successful and innovative projects.



currently building 70 residential units." This is a volume that is expected to rise steadily over the next few years. As Dijkhof Bouw primarily supports regional clients from design through to handover, it builds free-standing single-family homes for private clients as well as developing its own projects for housing associations. "In addition to private individuals with 20 shares and housing

associations with a 40 percent share, the remaining 40 percent come from in-house project development," the managing director concludes.

Decision in favor of a compact, multifunctional plant

In order to be able to build the single-family houses designed by Dijkhof Bouw

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