
Offsite construction machinery and equipment

Flexible solutions tailored to your
timber frame production needs



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Contents

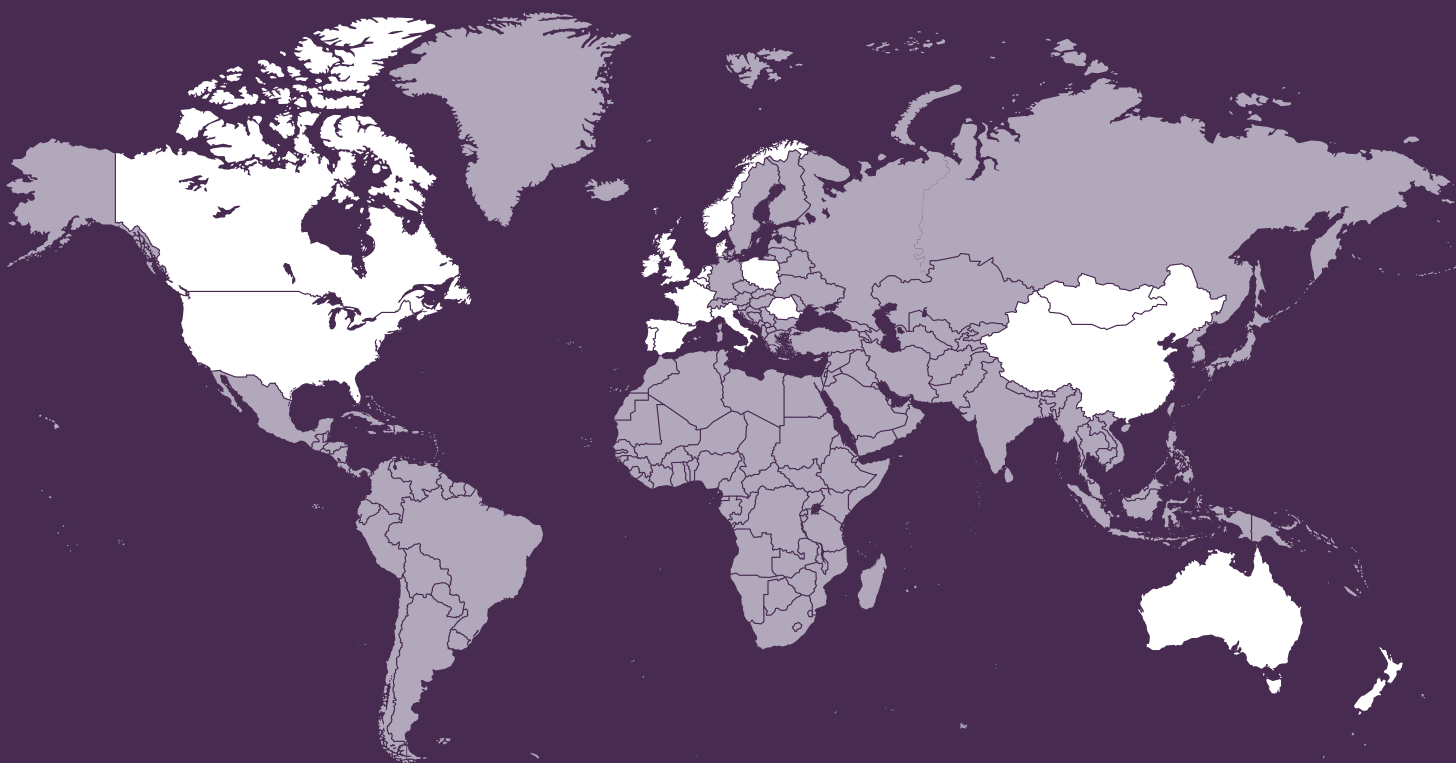
Case Study DUPAC	4
X-Combi	5
X-Frame	6
X-Multi	7
X-Tilt	8
X-Fill	9
X-Floor	10
X-Square	11
X-Storage	12
Software	13
Case Study HDO Groep	14

About H&M

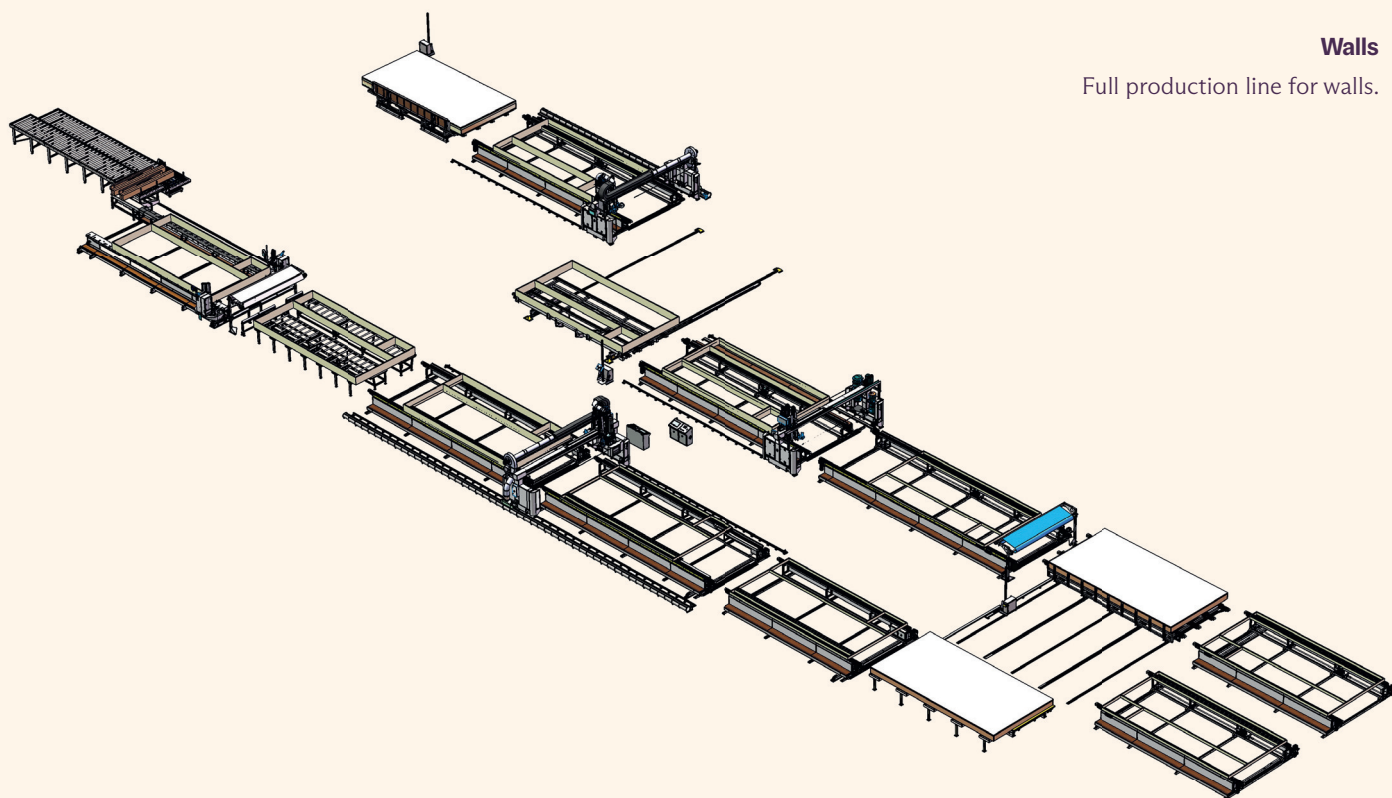
H&M specialises in the design, manufacturing, and global distribution of automation equipment for the offsite construction sector.

Focused on timber frame construction, as well as elements and volumetric methods, H&M offers cutting-edge solutions, including individual machines, production lines, and full modular factory setups. Our systems automate key processes like nailing, stapling, routing, panel rotation, and lifting, optimising production of prefabricated walls, floors, and roofs. In response to rising global housing costs, our technology provides a cost-effective solution.

Current worldwide installations



Open and closed panel production lines

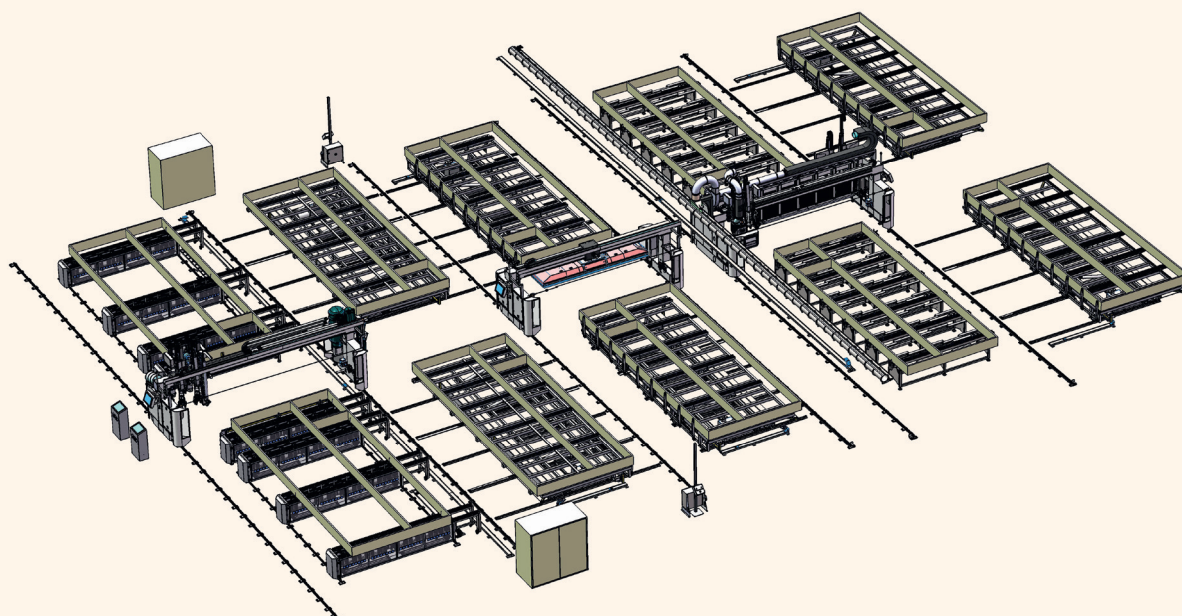


Walls

Full production line for walls.

Floor & Roofs

Full production line for floor & roofs.



H&M collaboration fuels growth at DUPAC

Over the years, Belgium based DUPAC has evolved into a key player in the European timber frame construction market, boasting a loyal customer base and a thriving reputation. Central to this success story is the partnership with H&M Machines, a relationship that has not only boosted production but has been instrumental in the company's growth.

DUPAC specialises in crafting Kerto-Ripa® building elements, focusing on floors and roofs. Leveraging H&M's bespoke nailing and gluing bridges, combined with dedicated tables for precise beam positioning and clamping, DUPAC has perfected a building system utilising engineered wood that allows for the creation of large-span timber solutions.



“H&M’s commitment to innovation and quality aligns seamlessly with our values at DUPAC. The timber frame machinery they have provided has exceeded our expectations, contributing significantly to our growth and success.”

Marc Cuyvers, DUPAC founder

X-Combi

Complete assembly station for timber frame wall panel production

The H&M X-Combi is a compact, all-in-one solution for producing timber frame wall panels in the offsite and modular construction industry.

Combining the functions of a framing station and a nailing bridge, it occupies less than half the space and requires only one operator. The X-Combi securely clamps each panel, ensuring precise and efficient assembly from the first stud to the final cladding.

Key features

Multi-functional operation for framing, fixing, nailing and gluing

Drop-down pins ensure the panel remains square during manufacturing

Laser alignment for precise stud nailing

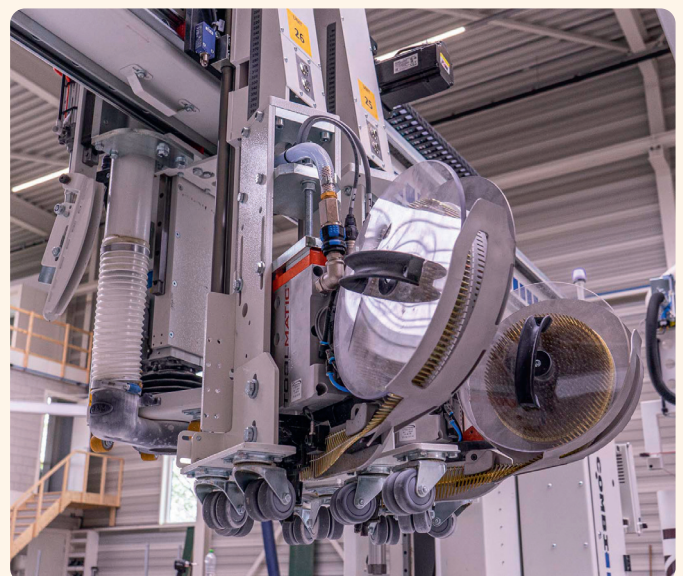
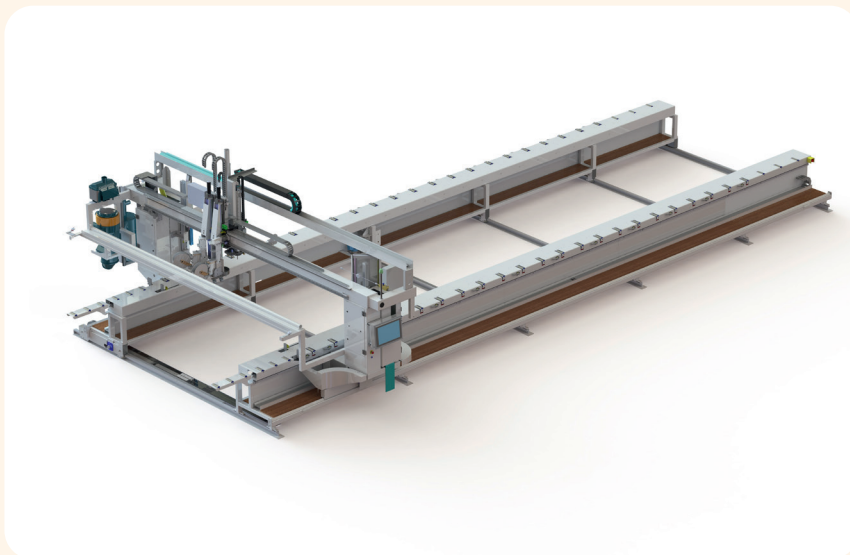
Multiple tool holders for different tool types

Optional router with integrated dust unit for the X-Combi

Optional intermediate support for short studs

Automated squaring and clamping of panels

More information about X-Combi

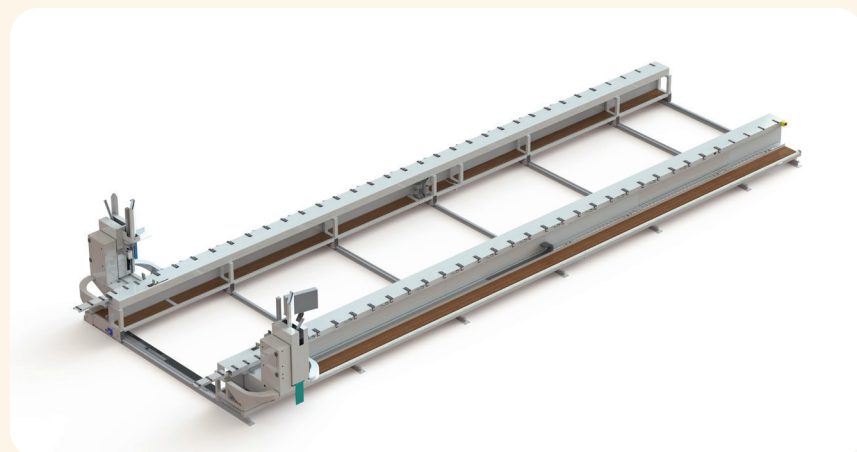


X-Frame

Automatic timber frame assembly station

The H&M X-Frame securely holds panels in place for stud and component assembly, allowing a single operator to position parts comfortably at the centre of the panel.

The station automatically places studs and sub-components using locating arms, while the nail guns' positions and firing sequences are controlled by the onboard CNC unit. Manufacturing instructions are seamlessly transferred from drawing software, enabling efficient scheduling without manual input. The interface provides continuous panel drawings with zoom and pan features, allowing for manual adjustments in special cases like twisted timber or complex sub-frames.



Key features

Independent clamping for rail and stud accommodates timber tolerances

Stud locator ensures precise positioning of timber components

Spacious tables enable sub-assemblies to be built in-frame or in advance

Software-configured multi-walling optimises production workflow

Optional dual saws can pre-cut frames while keeping them intact for side two operations

Optional stud/joist feeding carriages provide materials conveniently for the operator

Automated squaring and clamping of panels

More information about X-Frame

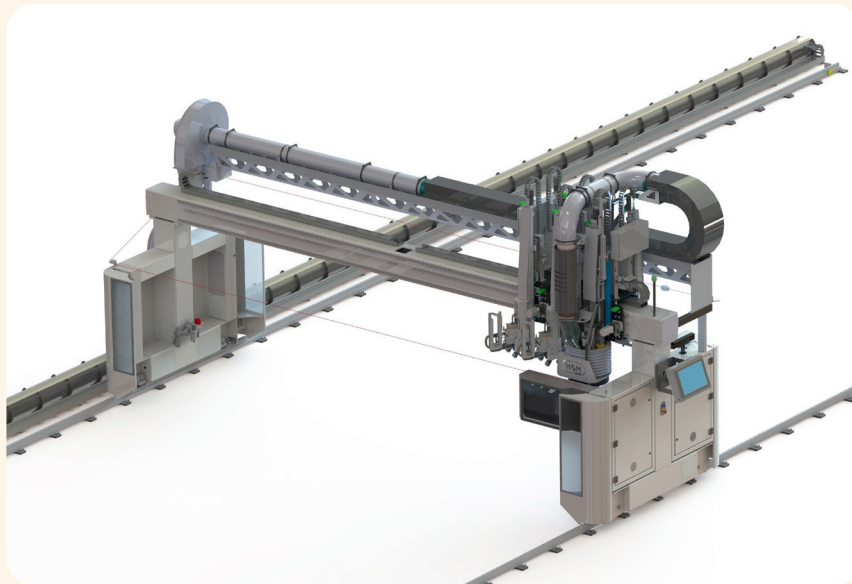


X-Multi

Fully automatic timber frame nailing bridge

The H&M X-Multi is an automated system for securing sheeting and cladding in offsite and modular construction.

It can be installed on a dedicated table or floor-mounted rails to traverse butterfly tables or multiple stations. It performs precise nailing/stapling based on CAD data via specialist software. With one or two CNC carriages, it handles multiple tools simultaneously to boost throughput, and gluing systems can be added for flooring applications.



Key features

Bridge can be mounted on dedicated tables or floor rails to traverse butterfly tables or multiple stations

Features walk-through operation for easy panel transfer

Optional motorised transfer chains

Additional router options for windows, doors, and panel sizing

Available tool changer for multiple tools

Saw units with inclination for exterior cladding finishing

Special batten fixing attachments, including locators and timber straighteners

Vertical and horizontal configurations

Automated batten nailing from a magazine

Various cladding fixing options available

More information about X-Multi

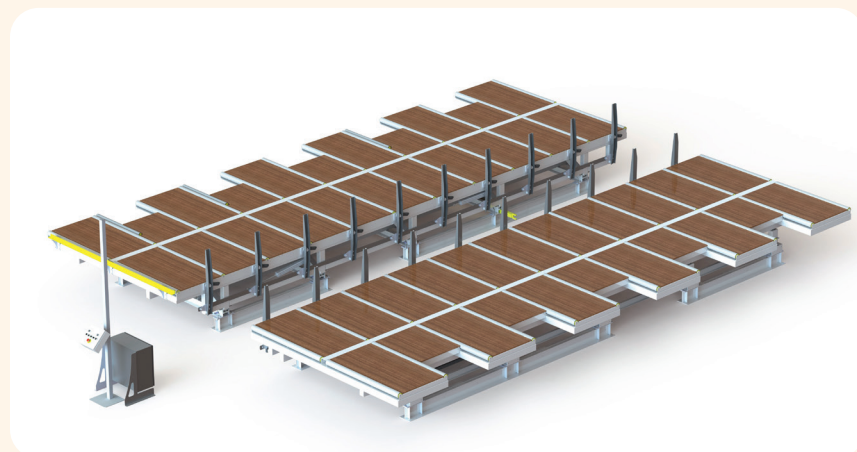


X-Tilt

Butterfly table for transporting, insulating and nailing timber frame panels

The H&M X-Tilt Butterfly Table features hydraulically operated tables with a hydraulic lift and fail-safe locking cylinders.

This system vertically positions panels, transfers them to a second table, and lowers them for insulation and panel closure. Operated by a floor-mounted control unit with push-button operation, it includes a light beacon and audible siren. The tables can also serve as assembly benches for walls and floors and integrate seamlessly into production lines.



Key features

Safe and quick flipping of timber frame panel

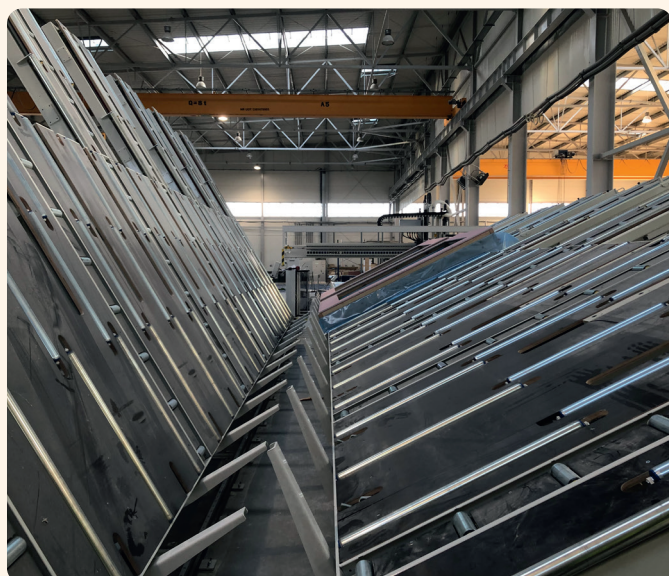
Ranging from 6m-12m with 1-3 tonne capacity

Flexible solutions that are custom built to meet any application requirement

Optional floor rail system for half-table movement during panel storage

Optional floor cassette assembly kit with 4 lateral slots (holes at 300, 400, 600mm), alignment bars, and adjustable clamping bars for various stud thicknesses. Priced per 6m table, fully retractable when not in use.

More information about X-Tilt



X-Fill

Automatic insulation filling bridge

The H&M X-Fill bridge system can be a semi-automated or fully automated setup designed to quickly fill prefabricated wall panels with various insulation materials like cellulose, wood fibre, and glass or rock wool.

The system adjusts to any cavity size or shape, thanks to its modular blowing plate. Users input the wall panel dimensions into the touchscreen, and the integrated PC control with Windows 10 calculates the required material volume, completing each fill in seconds.



Key features

X axis floor mounted rails with servo-controlled rack and pinion drive

Blowing plate mounted to Y axis with servo driven positioning

Pneumatic Z axis with pressure switch

Proprietary blowing plates ensure the correct fill density in all the areas of the element

Dedicated control unit is independent of the bridge control system

A variety of filling systems available depending on the insulation material

More information about X-Fill

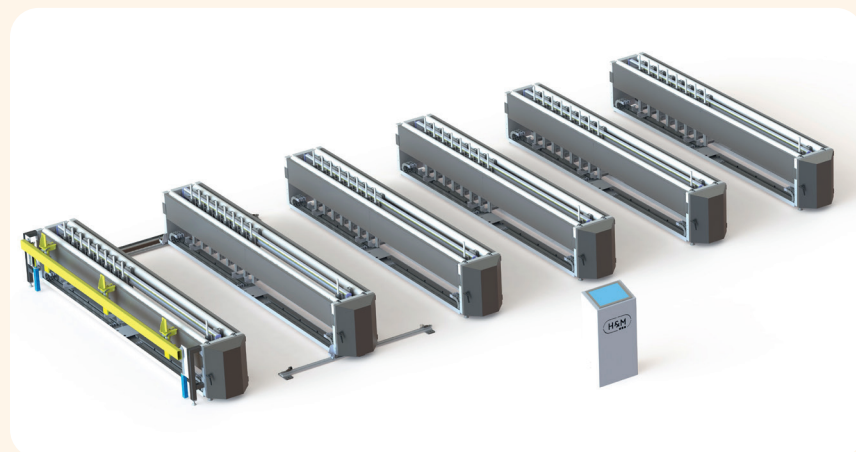


X-Floor

Automatic flooring and roofing jigg system

The H&M X-Floor is a versatile, low-level system for timber floor and roof joists, featuring floor-mounted units with adjustable pins for stable joist positioning.

This system offers customisable tables that cater to various production needs, from manual stand-alone stations for simple tasks to integration into larger production lines with retractable pins and roller transfers for enhanced efficiency. An optional nailing bridge, equipped with CNC capabilities and either manual or automated pin movement, provides precision and speed. The X-Floor is available in a base configuration or with additional options to boost efficiency and production capacity.



Key features

Rim beam end clamping ensures elements remain square

Adjustable pin height up to 400mm for I-beam applications

Pins adjust for various timber profiles; bars lower for element transfer

Tables can be integrated under a multifunction bridge

Supports tandem table operation CNC-controlled pin positions with software-driven movement

Setup configurations downloadable directly from the software

Gluing options for structural flooring include single or multiple nozzles

Separate heads for X & Y axis gluing available

Adjustable timings for decking material fixation

More information about X-Floor

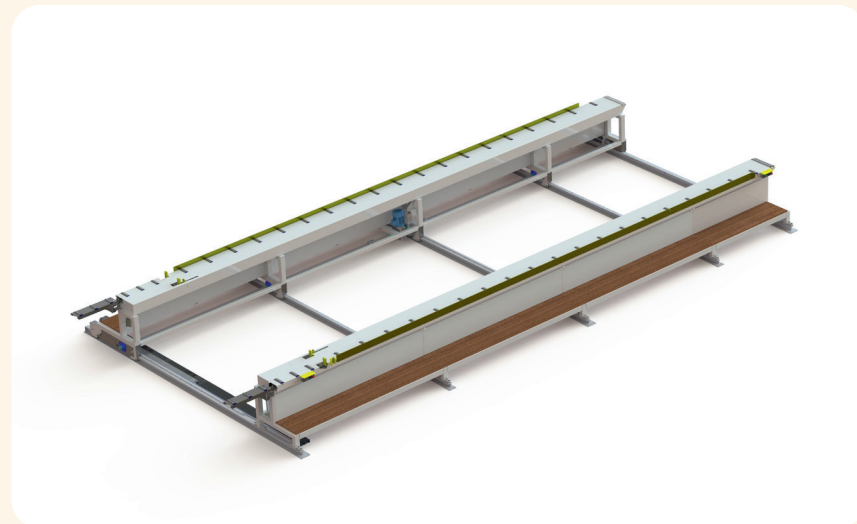


X-Square

Timber frame wall panel squaring station

The H&M X-Square for timber frame construction is a PLC-controlled squaring table, ideal for manual boarding or use with a rail-mounted nailing bridge.

It features easy-loading pop-up transfer rollers and a 3-point clamping mechanism for automatic alignment in the X and Y axes. Finished panels are easily released and transferred to the next station with a simple push-button action.



Key features

Easy panel transfer with pop-up pneumatic rollers

Motorised width adjustment via rack and pinion with locking system

3-way clamping for automatic panel squaring and clamping

Swing gates for easy access along the line

Optional to combine with an X-Multi CNC Bridge

Heavy-duty tables with one fixed and one movable side for panel squaring

Suitable for applying OSB or plywood

Optional chain conveyor for heavier panels

Can be used manually or with a rail-mounted nailing bridge

More information about X-Square [↗](#)



X-Storage

Versatile working and storage stillages
for modular construction projects

The H&M X-Storage is a vertical workstation tailored for modular offsite construction, designed for both processing and storing wall panels.

Panels glide on roller tracks for easy mobility, enabling straightforward installation of windows, doors, electrical, and cladding materials. The system secures each panel with a guide rail and roller conveyor, equipped with manually adjustable locking handles for stable positioning. The single-sided system allows access to both sides of the panel, whereas the double-sided system offers enhanced storage capacity but limits access to one side. It features a unique panel securing device for easy loading and unloading from the end or side, and includes two support arms per 10 meters (32 feet) of vertical line for panel support.

Key features

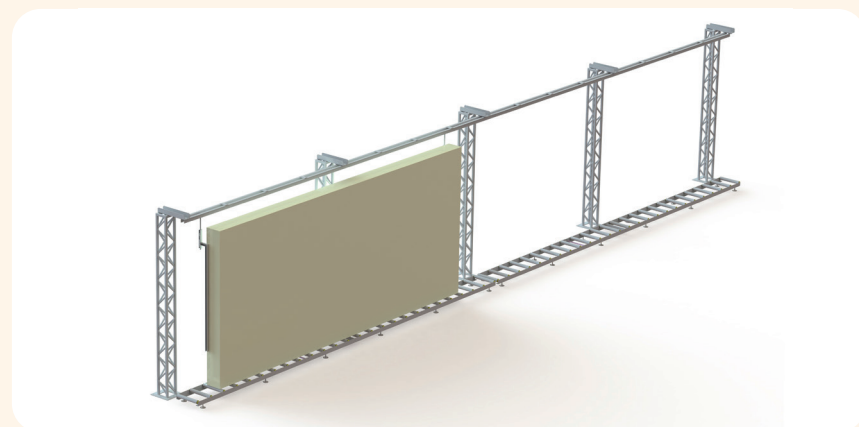
Flexible solutions that are customized to meet any panel storage requirement

Various panel transfer system options: floor skates, rollers, and more

Safe and secure working area for window and door installation, electrical, cladding, and vertical storage

Optional movable storage rack solutions integrated with a motor and floor rail system for panel storage

Custom-built to fit your factory layout and specific panel requirements



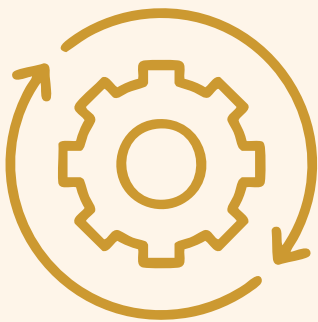
More information about X-Storage [↗](#)



Software

Revolutionise your timber frame design process

Convert industry standard timber frame design files to a file format that can be understood and processed by H&M equipment.



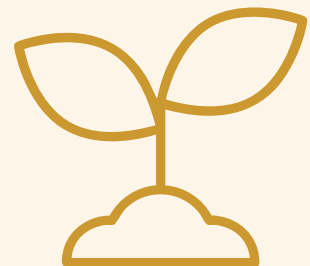
Convert

Easily convert design files for walls, panels, roofs, floors and ceilings at the click of a button.



Optimise

Optimise milling, nailing, sawing and gluing processes and speed up production times.



Evolve

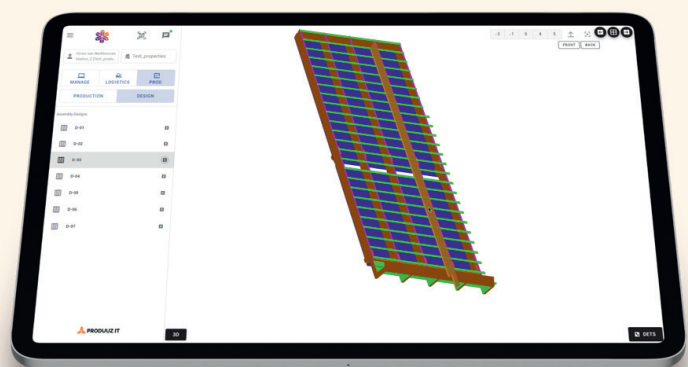
Our software is always evolving and improving, driven by your requirements.

Design a single wall or complete plot of houses with the ability to output to a specific file type (source file).

Use easily customisable settings to flip and rotate elements, correct sheet nail lines and milling lines.

Configure data for frame nailing including quantity and spacing of nails based on stud height.

View 3D imagery of elements and use simple controls to rotate, pan, zoom and adjust transparency.



Engineering a Sustainable Future at HDO Groep

Renowned for its innovative ‘optoppen’ building methods – enabling flexible housing solutions and the addition of new stories to existing structures – HDO Groep has consistently led the way in integrating cutting-edge technologies with eco-conscious practices.

Specialising in the design, production, and assembly of high-quality timber frame housing, the company operates as a fully integrated ecosystem, managing every aspect of production, engineering, and service under one roof. Committed to

sustainability, HDO Groep utilises bio-based materials, operates on self-generated energy, and adheres to circular principles, setting new standards for efficiency, quality, and environmental responsibility in the construction industry.

To sustain its market leadership and align with its ambitious sustainability goals, HDO Group turned to H&M Machines for advanced machinery solutions. This partnership has not only optimised production processes but also enhanced HDO Groep’s commitment to environmental responsibility.



“Our partnership with H&M Machines has been transformative. The X-Combi and X-Fill systems have not only streamlined our production but also aligned perfectly with our sustainability goals.”

Jeroen Rutte, Director of Partnerships and Proposition at HDO Groep

X-Combi

Versatility Meets Precision

The X-Combi assembly machine has transformed timber frame construction at HDO with its multi-functional capabilities – including framing, stapling, nailing, drilling, and routing. By cutting wooden panels to size with minimal waste, HDO has achieved significant reductions in wood and nail consumption by 40 to 50 percent. Integrated quality checks minimise errors, ensuring consistency in every product. Additionally, the X-Combi has enabled faster production cycles while maintaining high standards of quality. Engineers at HDO now enjoy full visibility into the production process, enabling better collaboration and oversight to further optimise the design process.



X-Fill

Revolutionising Insulation

The X-Fill insulation bridge system, featuring the modular X-Floc blowing plate, allows for precise filling of prefabricated wall panels with diverse insulation materials. The X-Floc adjusts to various cavity sizes and shapes, delivering insulation with unmatched accuracy. By using recycled paper insulation and minimising excess material, the X-Fill contributes to HDO's sustainability goals, reduces production times and improves overall output.

Looking ahead:

Scaling Innovation and Sustainability

With ambitious plans to achieve full sustainability by 2030 – including integrating sustainable practices across all partners – the company is setting a powerful example for the industry. As HDO Groep continues its journey towards a sustainable future, the partnership with H&M will undoubtedly remain a key pillar of its success.

Precision. Partnership. Progress.

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