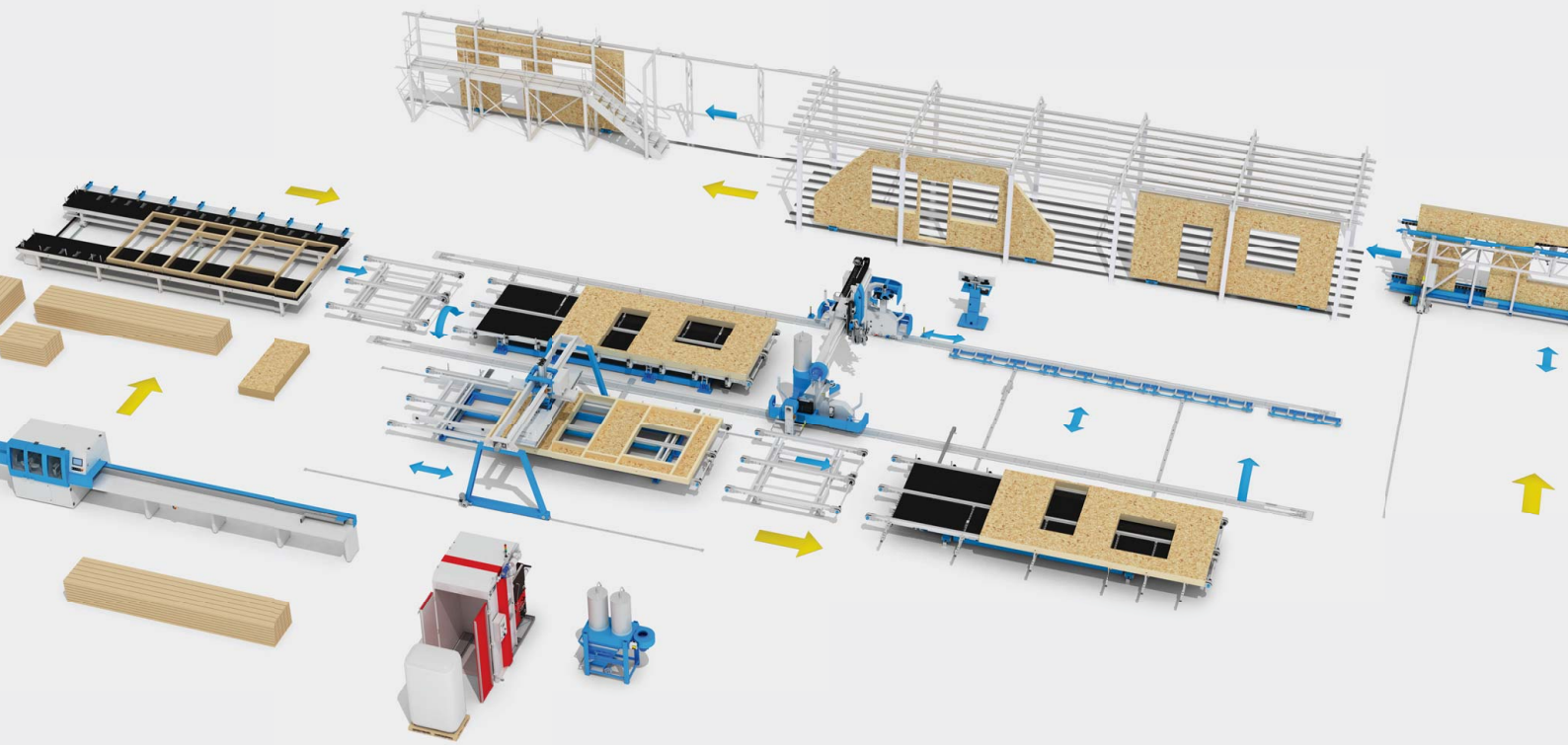
SOUKUP

inspired by craftsmanship

Wooden Buildings Manufacturing

Complete technology for
the prefab buildings production

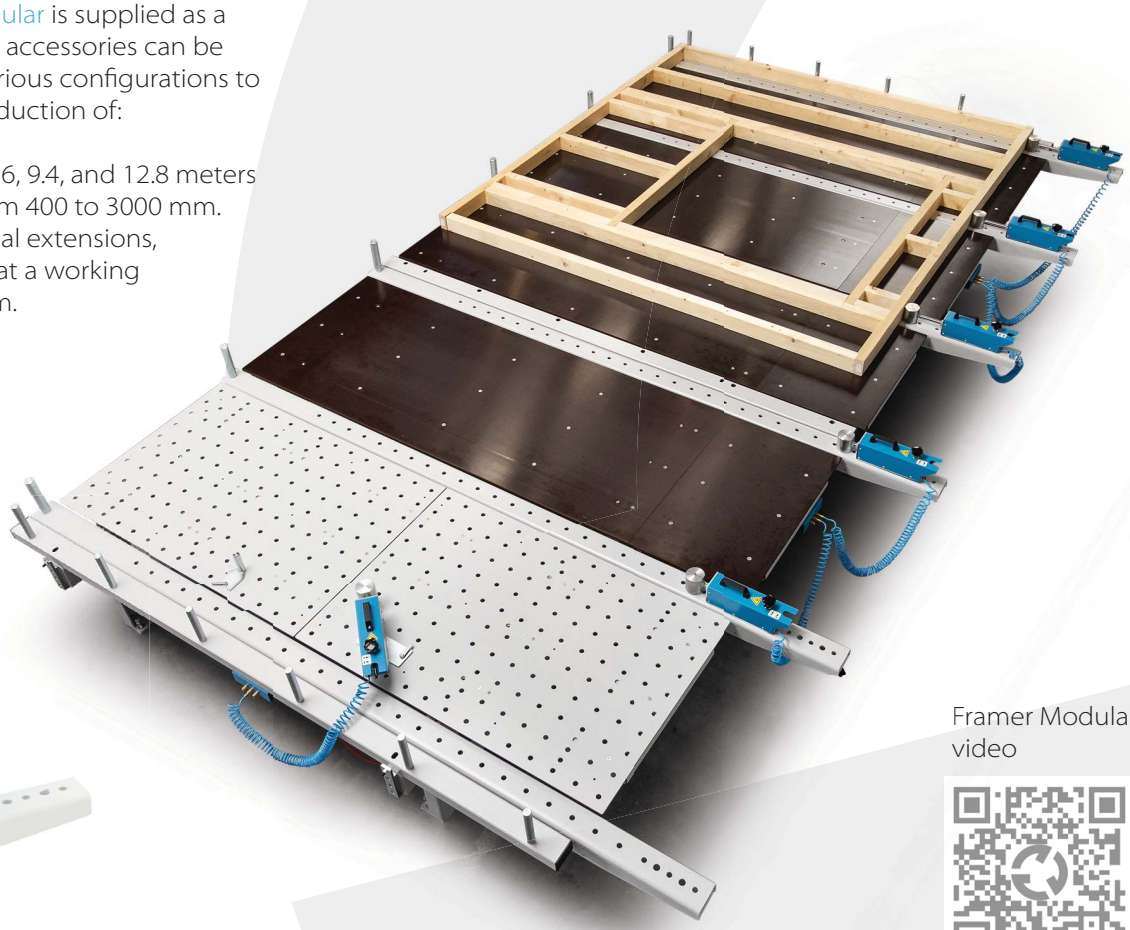


Framer Modular

Framer Modular is a component-based framing & assembly table for off-site panel construction. This system is a perfect solution for those who like to "do it yourselves". Engineered components are flat-packed and bolt-assembled to minimize transportation and installation costs while delivering a flexible, fully customized wall panel assembly station.

The Framer Modular is supplied as a kit with optional accessories can be assembled in various configurations to support the production of:

Panel lengths at 6, 9.4, and 12.8 meters
Panel widths from 400 to 3000 mm.
And with optional extensions,
up to 3800 mm at a working height of 700mm.



Rotational clamping support

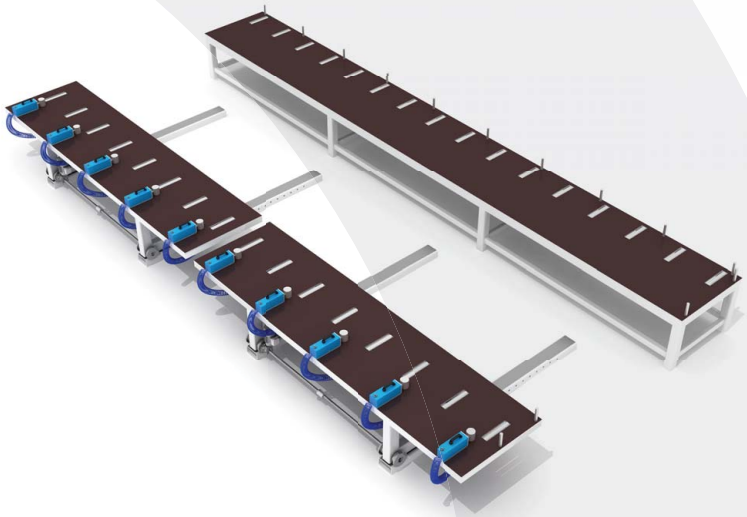
Framer Modular video

Pneumatic clamps with working force of 1200 N (6 bar)

Removeable Beam Extensions

Framer Line

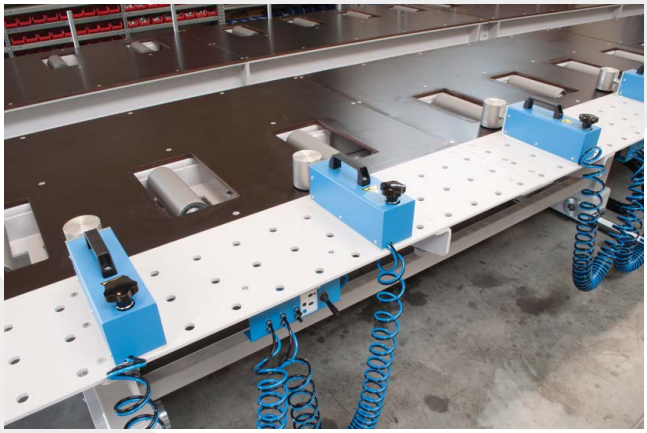
This table is designed as entrance workplace facilitates quick and variable assembly of complete wooden frames with easy and safe transport to next assembling possition.



- Robust design for heavy industrial use
- 1+1 separately controlled table for panel length up to 12 m
- Integrated rollers for panel movement withneumatic lifting
- Powered width setting for panels from 2 to 4 m
- Flexible mounting ergonomics
  (ergonomically designed passageways for stowage)

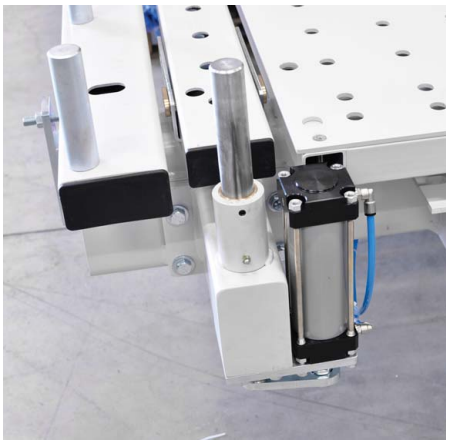
Framer Line

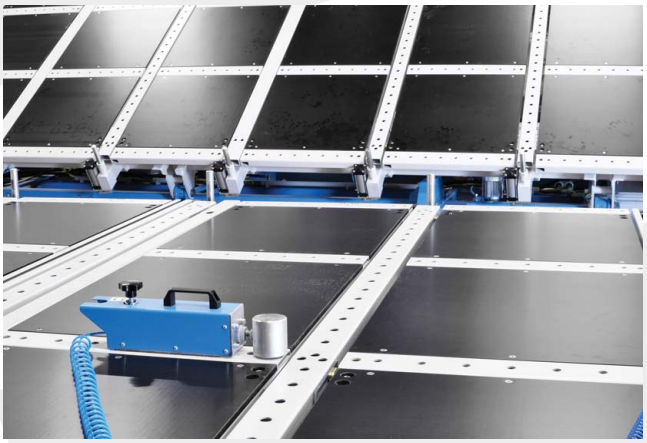
Pneumatic clamps and integrated rollers

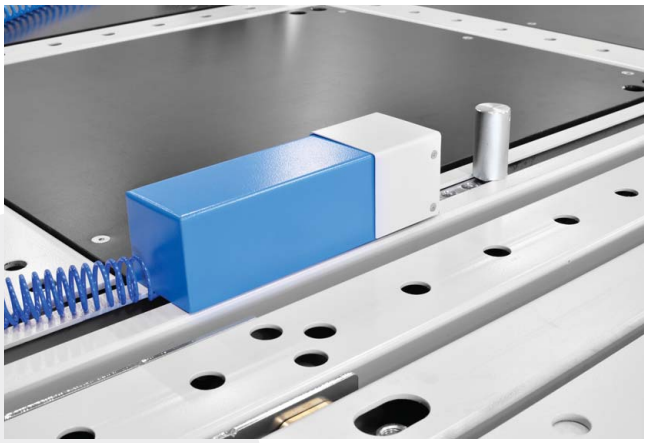


Wing

The tilting Wing table is designed for the production of wooden sandwich panels. It enables a complete frame to be fixed using adjustable pneumatic clamps. The frame is then covered, and then using the tilting mechanism, and it is moved to the opposite working table. On the opposite working table, the frame construction is finished with insulation filling, cabling and a second cover layer. The surface of the tables is covered with plywood, when integrated into the lines, then equipped with non-driven rollers or a flat chain drive.







- Work space between tables up to a 1600 mm gap
- Ergonomic solution for working on both tables
- Suitable for panel thickness 100 – 600 mm
- Can be used as a transfer station for the panel stack in compact production lines
- Robust design for heavy industrial use
- High productivity - minimised "dead" times
- Crane handling of panels avoided
- Complete accessories for typical and atypical panels
- Can be set up in low height production halls

Notcher

Notching milling machine for advanced framing

- Reinforcement for ceiling structure
- Lintel beams and headers above windows and doors
- Connections of multifoor studs with lintel beams - Baloon Frame
- Light alloy milling tool with spiral knives:

  Tools up to ø300 mm
  for milling up to 100 mm
  (9 kW, 6000 rpm)

Crossline 500

The automatic crosscut saw Crossline 500 consists of a machine with a sawblade of diameter 500 mm, a servo-driven electronic loading pusher, and a fixed unloading table. The standard length of the entrance table is for wood of 6, 9 or 12 meters. The exit table is 4, 6 or 9 meters long. The machine can be a part of production lines equipped with material handling conveyors and manipulators. An optionally attached label printer automatically labels elements as they exit for easy identification in subsequent assembly. Other options are an inkjet or laser printer. Crossline 500 can become part of an integrated production control system with data from WorkCreator or third-party software.

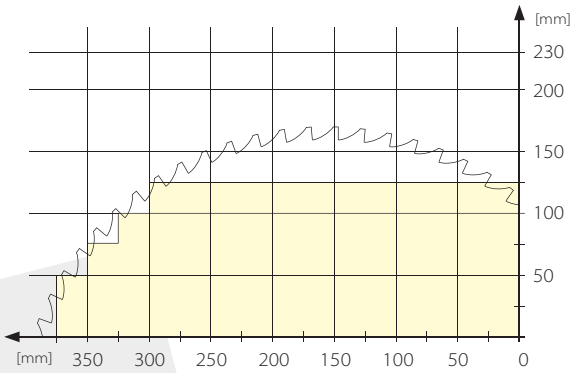
Crossline 650

Automatic crosscut saw Crossline 650 is mainly intended for the production of trusses. The machine is equipped with a turntable with a ø650 mm sawblade facilitating angled cuts of ± 70°. The material is inserted into the machine by a servo-driven electronic pusher. The head of the material is automatically detected as it is pushed into the machine. The cutting accuracy is ensured by two upper and two side pneumatic clamps with individual control and adjustment. After the material is positioned, clamped, and the saw angle set, the saw blade automatically rises to perform the cut. After cutting, the material is released and pushed to the outfeed table. The machine can work manually or automatically, linked to data from WorkCreator or third-party software (BTL files).

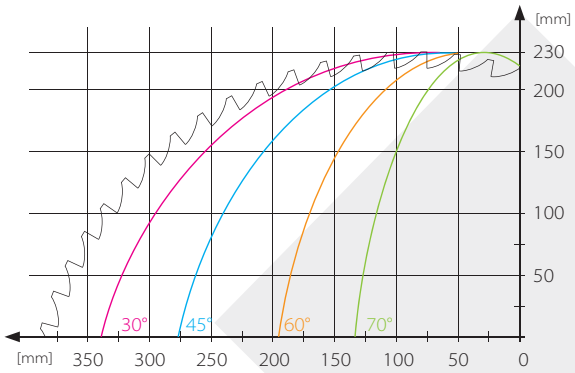
Crossline	500	650
Saw blade diameter	500 mm	650 mm
Cut angle	90°	20° - 160°
Material lenght	6000 mm (9000, 12000)	6000 mm (9000, 12000)
Max. cutting height	100 mm	160 mm
Feed speed	0 - 60 m/min	0 - 60 m/min
Saw blade motor	7,5 kW (10 HP)	7,5 kW (10 HP)
Tolerance	0,5 mm/m	0,5 mm/m
Dust extraction	100 + 120 mm	120 + 2 x100 mm
Touch screen control	10˝	12˝
Lenght	11960 mm	13350 mm
Width	1210 mm	1270 mm
Height	1590 mm	1805 mm

Crossline 650M video

cutting diagram for Crossline 500



cutting diagram for Crossline 650



Grooving module – Crossline 500M, Crossline 650M

- Lower milling unit for automatic production of grooves in the material for wooden houses frames
- Width of milling groove max 60 mm (according to tools)
- Max depth of milling 38 mm
- Increased structure stiffness and increased production capacity

Pontec

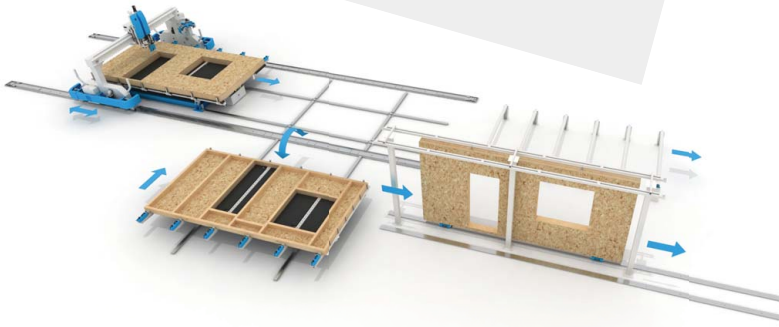
The plant is already in its basic configuration equipped with a milling spindle with liquid cooling, with a C-axis for the use of aggregates, a rotary tools changer magazine for 8 tools. The second unit is a Bea stapler. The machine can be extended with another milling unit with an aggregate saw unit or another stapler (nailer).

The device is supplied with an integrated extractor also suitable for gypsum fibre boards.

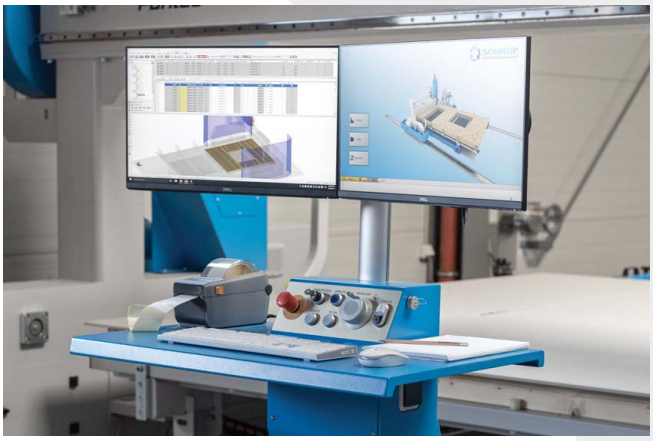
The robust construction corresponds to industrial use. Travel in the X-axis is by means of two synchronized servomotors with nylon belts. The Y-axis is guided in precise linear bearings with a rack and pinion drive. The milling unit is driven in the Z-axis by a servomotor with a ball screw, the stapler by a pneumatic piston.

The whole device is mounted as a part of an individually designed manufacturing line. Protective devices prevent collisions when entering the work area and stopping the machine when moving it.

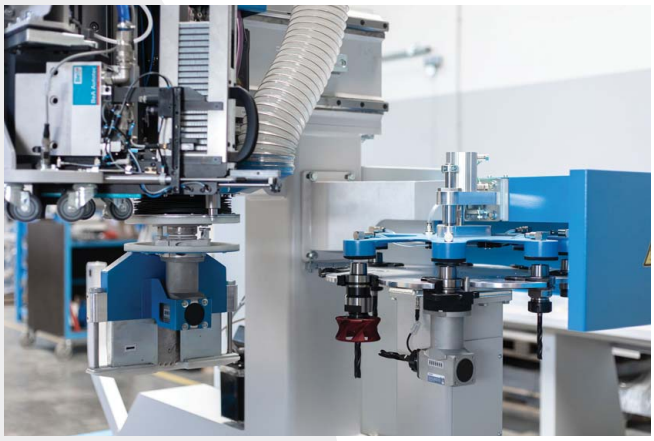
We also design smaller production lines with Pontec and just 2 movable tables



Industrial PC Beckhoff with two large screen monitors



Automatic toolchanger with 8 positions



Milling unit

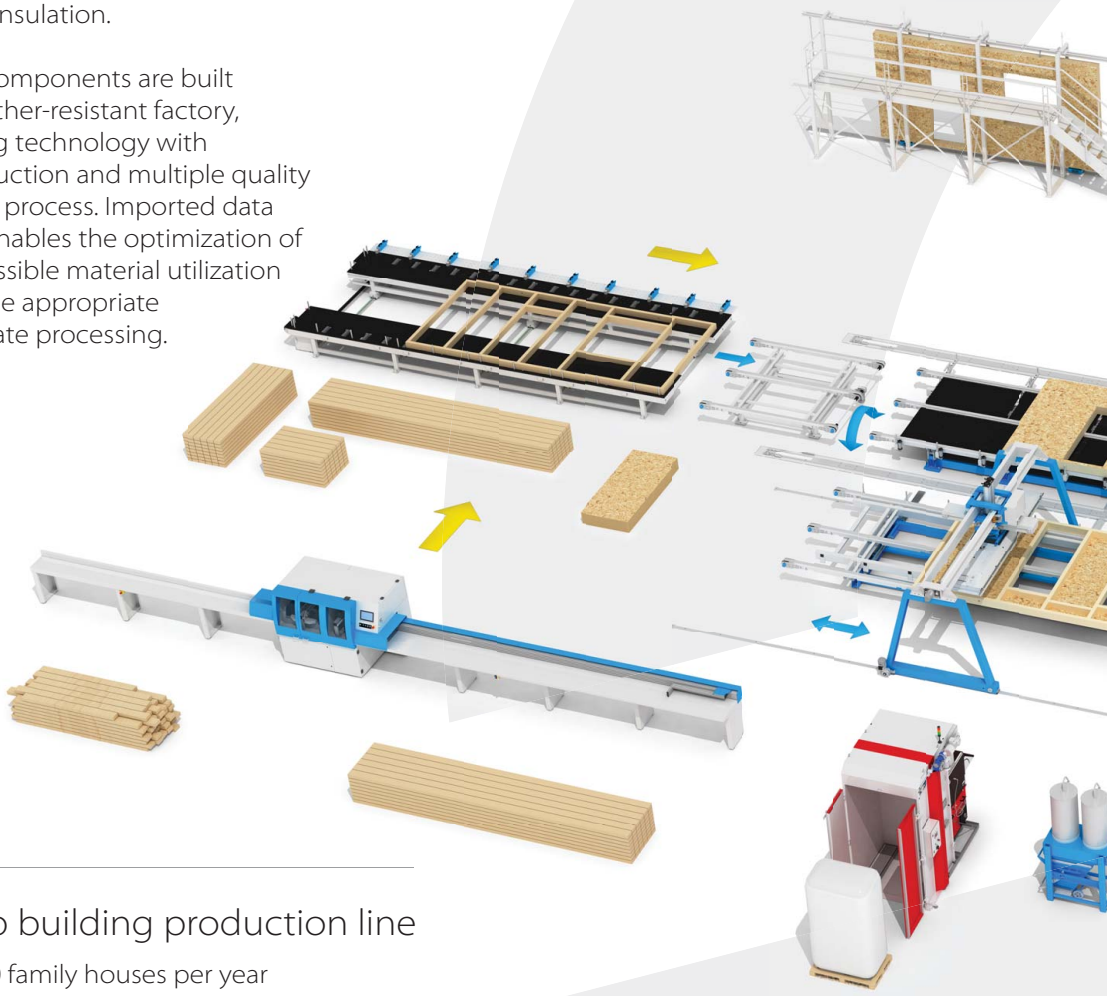
Automatic linear magazine for pneumatic tools

Saw unit with integrated extraction

COMPLETE TECHNOLOGICAL SOLUTIONS

Prefabricated and modular construction is becoming more common and is often recommended for energy-efficient and sustainable houses. As prefabrication takes place in a controlled production environment and follows specified standards, all components are built in uniform quality. This is important for accurate structure, tighter joints and better wall insulation.

Thanks to prefabrication, all components are built by experienced staff in a weather-resistant factory, equipped with manufacturing technology with predictable workflow in production and multiple quality checks throughout the entire process. Imported data from the planning software enables the optimization of timber length for the best possible material utilization and machine control using the appropriate CAD/CAM interface for accurate processing.



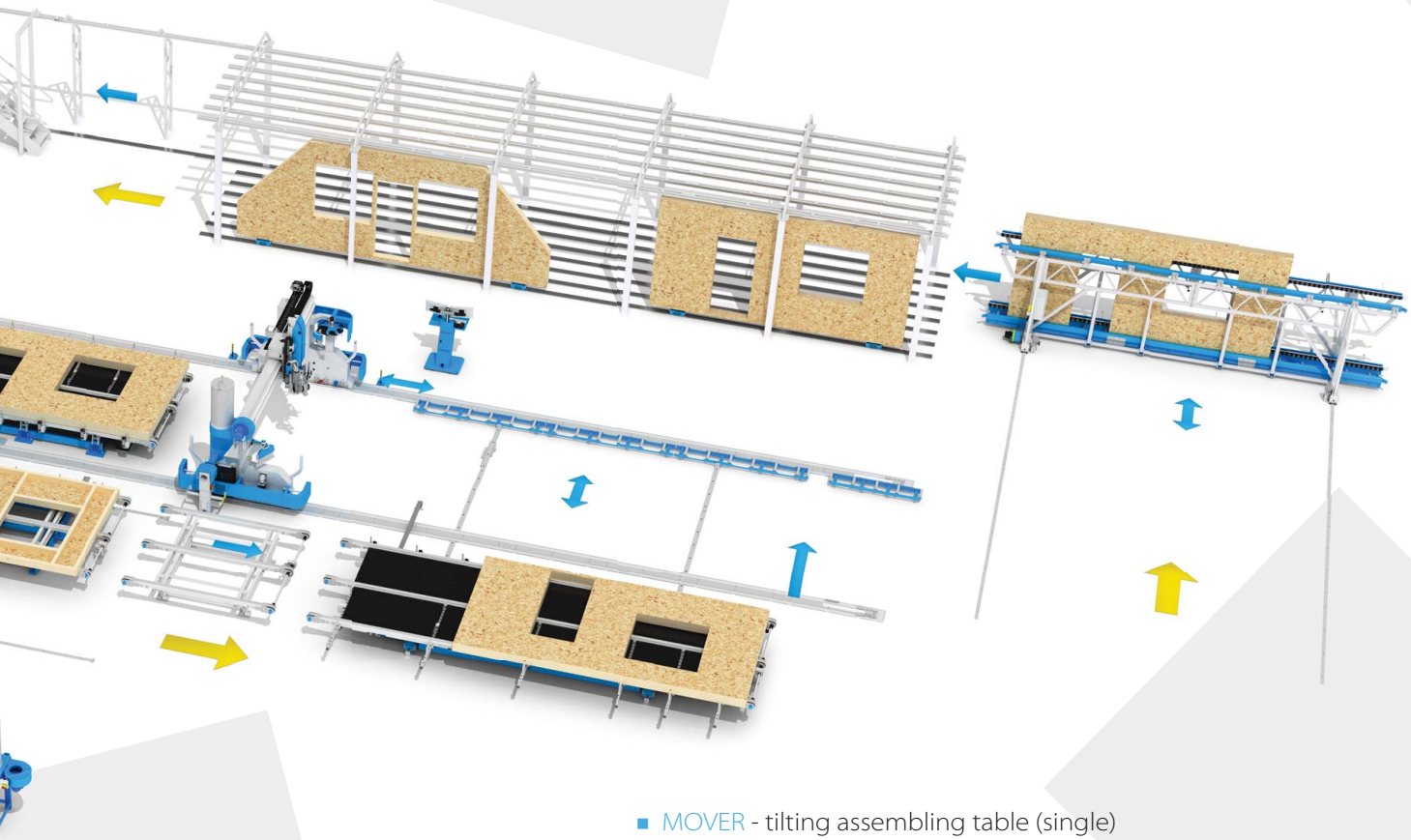
An example of prefab building production line

with production for up to 100 family houses per year

- CROSSLINE 650M - automatic crosscut saw equipped with a turntable and lower milling unit
- FRAMER LINE - assembling line
- WING - tilting assembling table (couple)
- PONTEC - multifunctional CNC-controlled bridge
- X-FLOC - portal for blown insulation

MADE IN CZECH REPUBLIC

- Complete project documentation
- Individual customer solutions



- MOVER - tilting assembling table (single)
- TRANSPORTER - moves panels from the assembly tables into and out of storage
- STORAGE - holds the panel upright for finishing and for storage awaiting dispatch

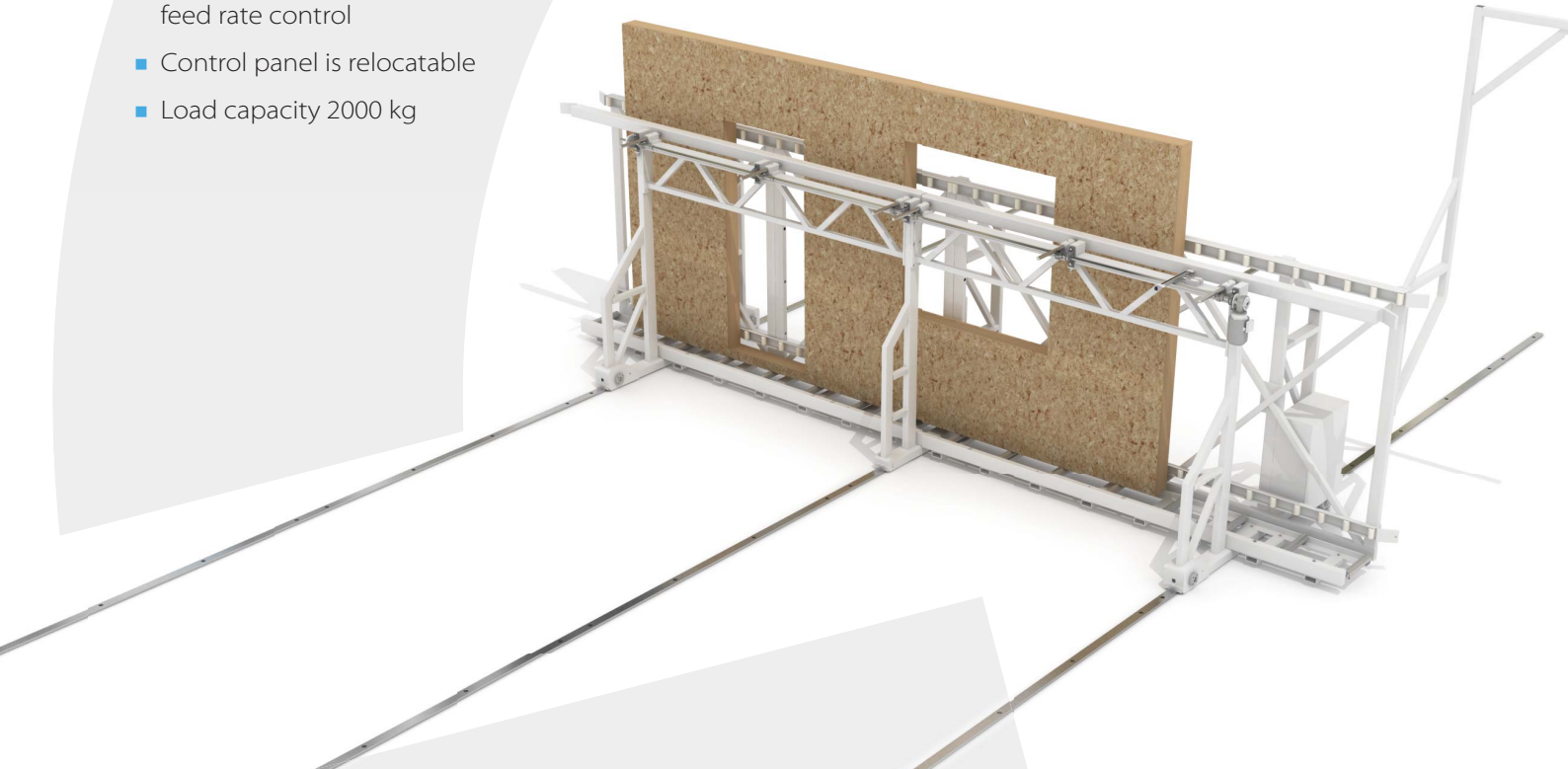
Benefits of our technology

- Fast and safe handling of panels
- Small production area requirement
- Production hall with low ceiling height - reduced heating and maintenance costs
- Optimized technical solution with uniform capacity across all workstations
- Possibility of gradually increasing capacity
- Economically balanced investment

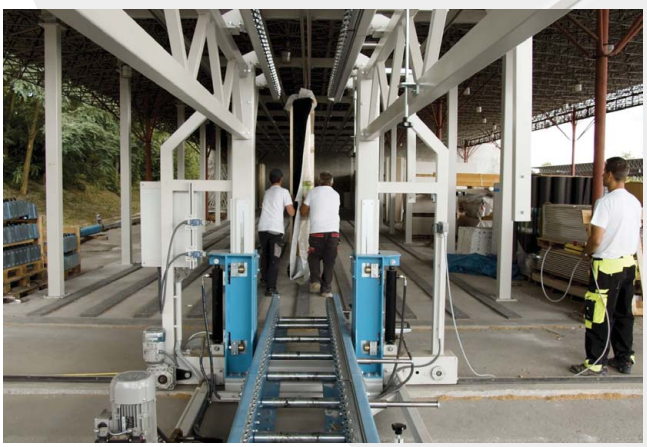
Transporter

Verical panel transporter for variable height panels

- Working length 6 m - 9 m - 12 m
- Motorised movement along transverse tracks
- Smooth electronically controlled feed rate control
- Control panel is relocatable
- Load capacity 2000 kg



Mobile shifting equipment designed to deliver panels from assembly tables to individual stack trays.
The structure consists of a steel welded frame which moves along a transverse track. The panel is manually pushed into the frame and transversely moved to the designated position by an electric motor.



Storage

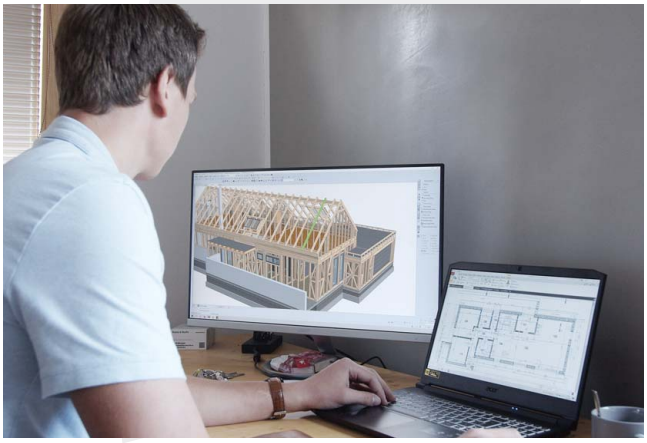
Track storage for holding and finishing wall panels in a vertical position. Allows for finishing of the panel when it's standing in the track, for example, for the installation of windows and preparation of facade systems. Carriages enable panels to be moved by hand along the track. A properly designed track prevents storage and expedition complications, which are the biggest source of "dead" production times. The total capacity of the storage facility should be able to store around a weeks worth of panel production.

The proposed configuration of the finishing facility depends on the following parameters:

- planned production capacity
- maximum length of produced panels
- level of panel prefabrication
- handling equipment in the dispatch area
- production area dimensions
- material flow

Technolgy with smart workflow

The production of wooden buildings is a relatively young field compared to traditional construction, and it is an opportunity to use the most modern methods of work. The architect creates a project, or the customer chooses a typical house. All data from the design software is converted to BTL format, which carries information about processing individual elements and entire panels. According to the project, the Crossline automatic saw cuts the elements and mills the construction locks precisely. The base frame is folded on the workbenches, and the Pontec multifunctional machining centre covers and formats the panel and cuts openings for windows or installations. Before that, however, we can simulate the whole process in the Lignocam environment to rule out possible errors. Lignocam processes the project's BTL files and generates a CAM control file for the Pontec multifunction centre. At the same time, we also have information on machining time to plan the entire process to achieve a smooth production flow. In addition to the prefabrication of wooden panels and the production of modules, our technology can be used in the production of light steel elements. The multifunctional CNC-controlled bridge Pontec.



LIGNOCAM®

The multifunctional CNC-controlled bridge Pontec

video

Production can be set up to 80 - 100 family houses per year with Crossline and Pontec.

SOUKUP, established in 1991 based in the Czech Republic, has always been in tune with its customers' requirements. The primary reason we started to build our own machines was that we were unable to find any machine on the market which could fully match the carpenter's way of thinking and doing things.

By taking a more in-depth look at our projects, you will see that there are many original approaches and solutions to various technical tasks all based on our extensive practical experience of producing woodworking machines.

We do not want our customers to simply be able to use the machines; more importantly, we want them to feel naturally involved as part of the overall process. We believe that the correct technological choices and subsequent implementation in conjunction with the needs of our customers are key factors in the success of their future production. We will be pleased to share our knowledge and experience with you.

SOUKUP

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