



# Opti-Joint

Automated finger-jointing systems

Opti-Joint H-200

Opti-Joint V-8



**Optimization of staff and wood resources**

**03** Automated finger-jointing systems

**04** Opti-Joint H-200

**06** Opti-Joint H-200 Shaper Details

**08** Opti-Joint V-8

**10** Opti-Joint V-8 Shaper Details

**12** Opti-Joint V-8 Press Details

**14** Opti-Joint Solution

**16** Technical Data

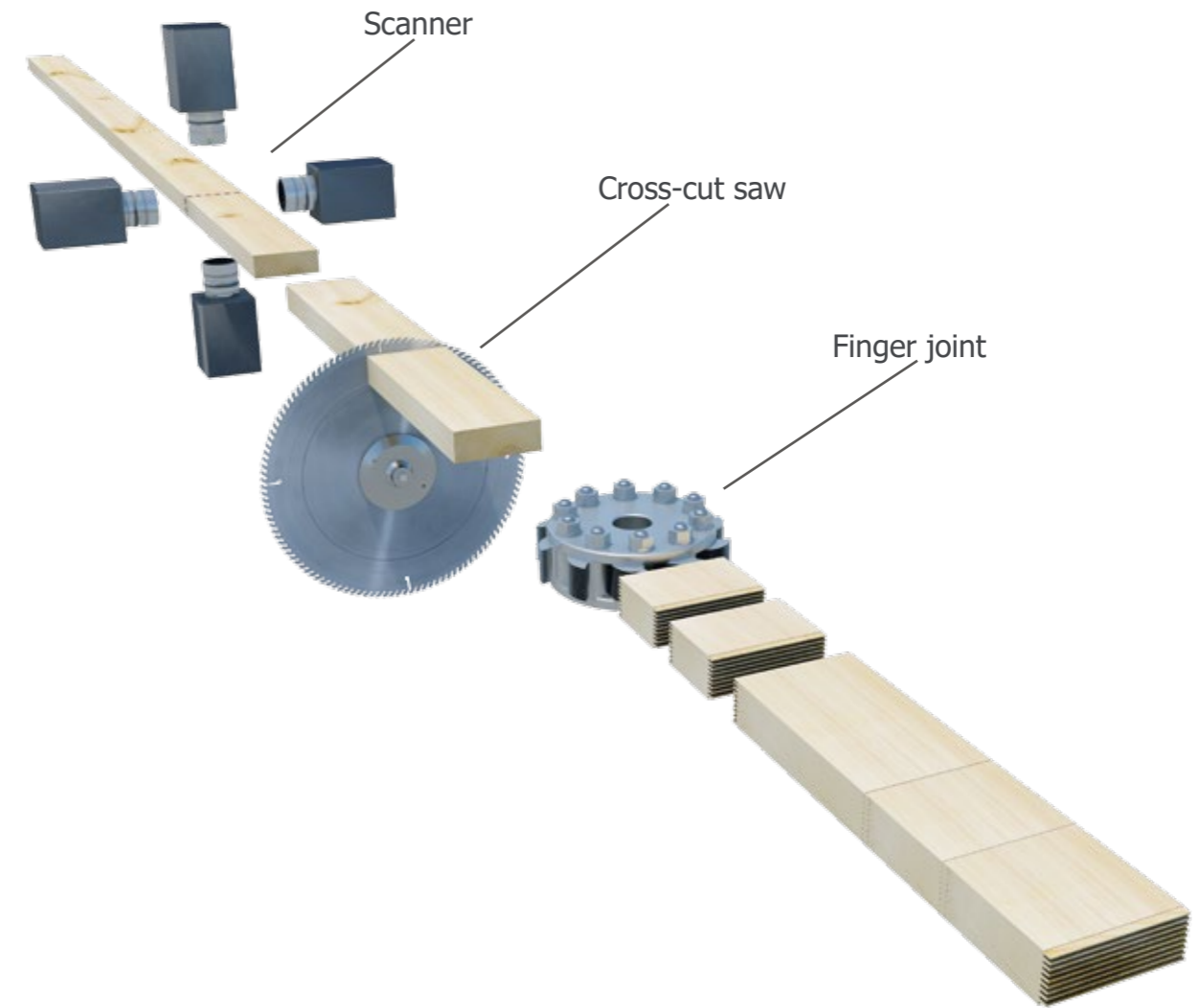
**17** Additional Products

**18** System TM service

## Finger-jointing machines

A System TM Opti-Joint horizontal or vertical finger-jointing machine ensures optimal utilization of your staff and wood resources. The Opti-Joint finger-jointing machines joint uniform-quality workpieces into a customized quality board at a very high capacity.

System TM's machine technologies provide our customers a high return on their investment when grading their lumber to achieve a customized grade for strength, quality and/or visual look of their end product. The finger-jointing process starts with the scanning of raw material, then cross-cutting this into the right quality and finally, finger-jointing this together into a customized uniform-quality board.



▶ **Make a wise move**

- let an Opti-Joint finger-jointing machine increase your lumber utilization and capacity!!

# Opti-Joint H-200

## Horizontal finger-jointing machine - Opti-Joint H-200

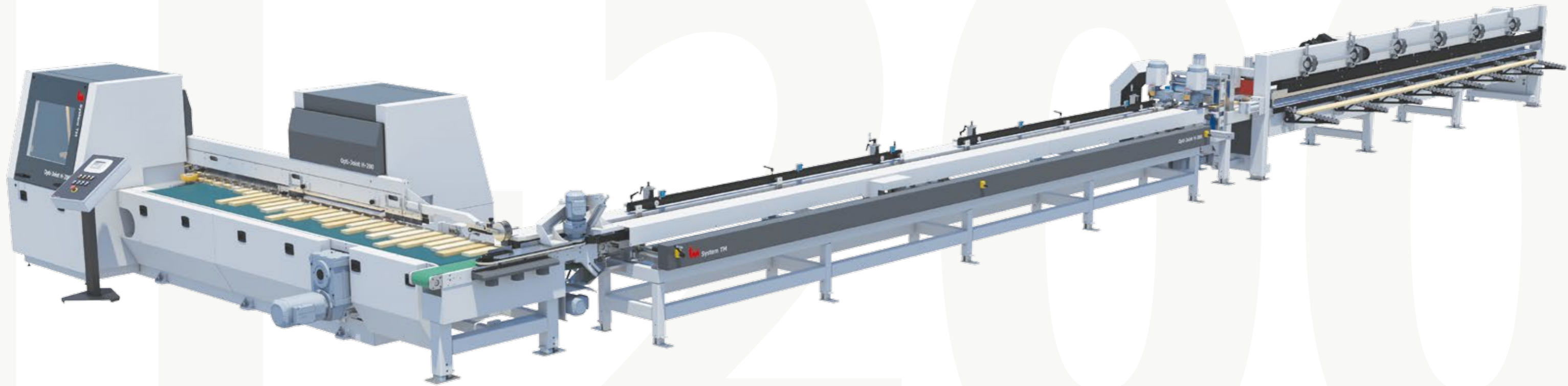
The Opti-Joint H-200 is a heavy-duty horizontal finger-jointing machine, characterized by an extremely high production capacity and machine utilization in terms of soft- and hardwoods. The finger-jointing machine is manufactured in a particularly durable fashion with mechanical and electrical components of high quality.

System TM has extensive experience in handling small workpieces at an exceedingly high capacity. This applies in relation to continuous steady flows of small workpieces during different processes, as well as flows from one machine to another. Thus, System TM's extensive experience forms the basis for the mechanical- and software control design of the Opti-Joint H-200 horizontal finger-jointing machine.

The high-speed transport of workpieces is highly safe and secure during the jointing, gluing and pressing processes. This minimizes stops throughout the transportation of workpieces, provides great performance capacity and high quality jointing.

## Why choose an Opti-Joint H-200 from System TM:

- ▶ High capacity, maximum precision and jointing quality
- ▶ Intelligent control system to ensure highest machine utilization and performance
- ▶ Complete hard- and software integration between all functions of the machines/line
- ▶ Automatic line control and adjustment from a single control and operator interface
- ▶ Extensive range of production statistics is accessible
- ▶ May be upgraded to operate with an infeed system (Opti-Feed), cross-cut saw (Opti-Kap), stacking system (Opti-Stack) and scanning technology
- ▶ High attention to operator safety and machine reliability



# Opti-Joint H-200 Shaper Details



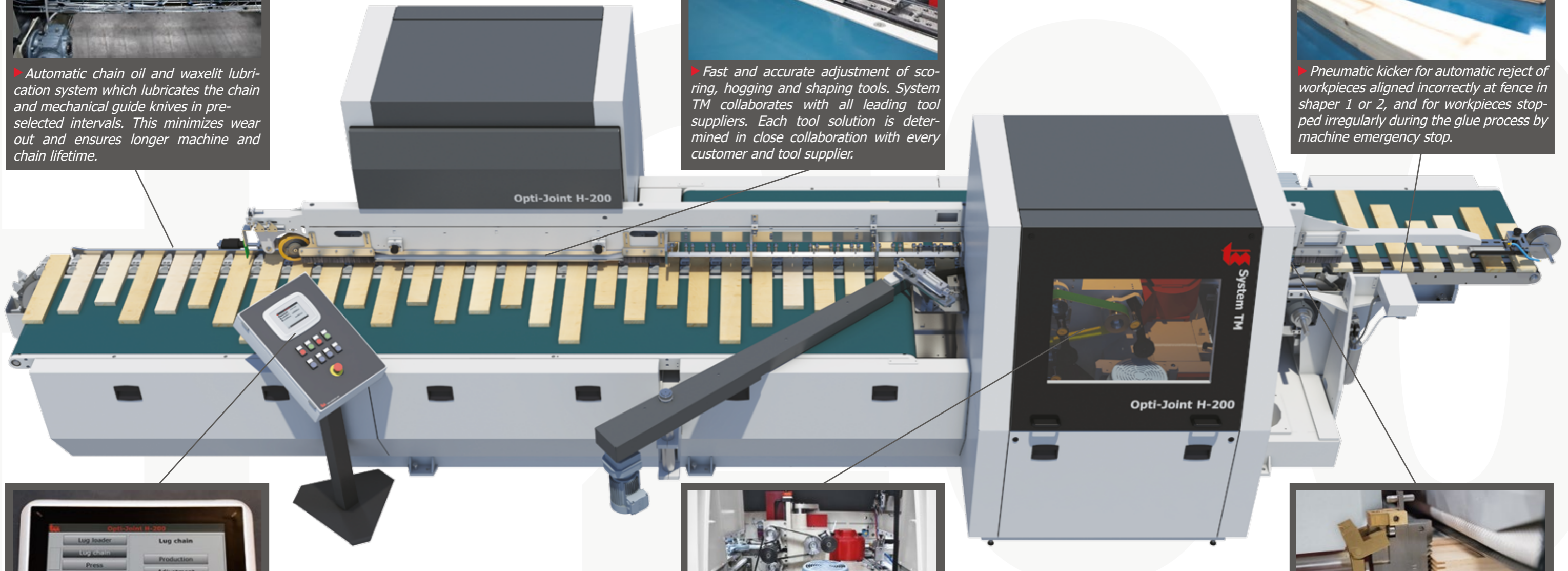
▶ Automatic chain oil and waxelit lubrication system which lubricates the chain and mechanical guide knives in pre-selected intervals. This minimizes wear out and ensures longer machine and chain lifetime.



▶ Fast and accurate adjustment of scoring, hogging and shaping tools. System TM collaborates with all leading tool suppliers. Each tool solution is determined in close collaboration with every customer and tool supplier.



▶ Pneumatic kicker for automatic reject of workpieces aligned incorrectly at fence in shaper 1 or 2, and for workpieces stopped irregularly during the glue process by machine emergency stop.



▶ Multi touch screen including an extensive range of machine & production statistics. System TM software solution with automatic stop position for shaping- and glue control of the workpieces.



▶ Heavy cast iron construction of the shaper body for high stability. This consists of scoring, hogging and shaping units. It provides high precision adjustment of all units and belt drive supervision for tool protection.



▶ Component glue processing. System TM collaborates with all leading suppliers of glue application. Every glue system is determined in close collaboration with every customer and glue application supplier.



# Opti-Joint V-8

## Vertical finger-jointing machine - Opti-Joint V-8

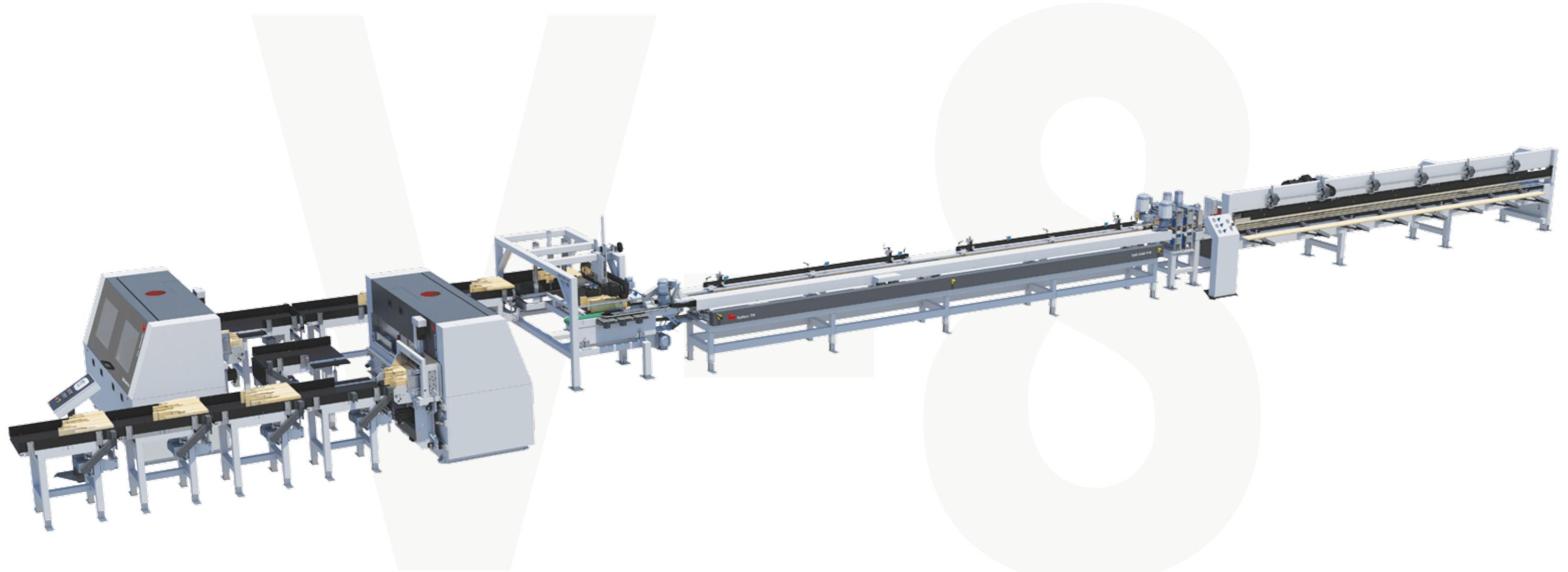
The Opti-Joint V-8 is a high speed vertical finger-jointing machine. The design of the machine provides high quality finger-jointing with optimal machine utilization and excellent capacity performance in both soft- and hardwoods.

The heavy-duty design of the finger-jointing machine is produced with mechanical and electrical components of high quality, providing the highest level of stability and precision for the tooling and jointing in all workpiece dimensions.

The mechanical- and software control design of the Opti-Joint V-8 vertical finger-jointing machine is developed based on the extensive experience of System TM in relation to handling small workpieces at a high capacity. This is controlled by intelligent software which minimizes machine stops and guarantees high machine utilization in terms of available number of working minutes.

## Why choose an Opti-Joint V-8 from System TM:

- ▶ High capacity, maximum precision and jointing quality
- ▶ Intelligent control system to ensure highest machine utilization and performance
- ▶ Complete hard- and software integration between all functions of the machines/line
- ▶ Automatic line control and adjustment from a single control and operator interface
- ▶ Extensive range of production statistics is accessible
- ▶ May be upgraded to operate with an infeed system (Opti-Feed), cross-cut saw (Opti-Kap), stacking system (Opti-Stack) and scanning technology
- ▶ High attention to operator safety and machine reliability



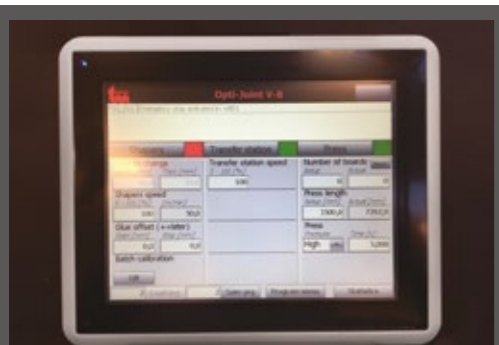
# Opti-Joint V-8 Shaper Details



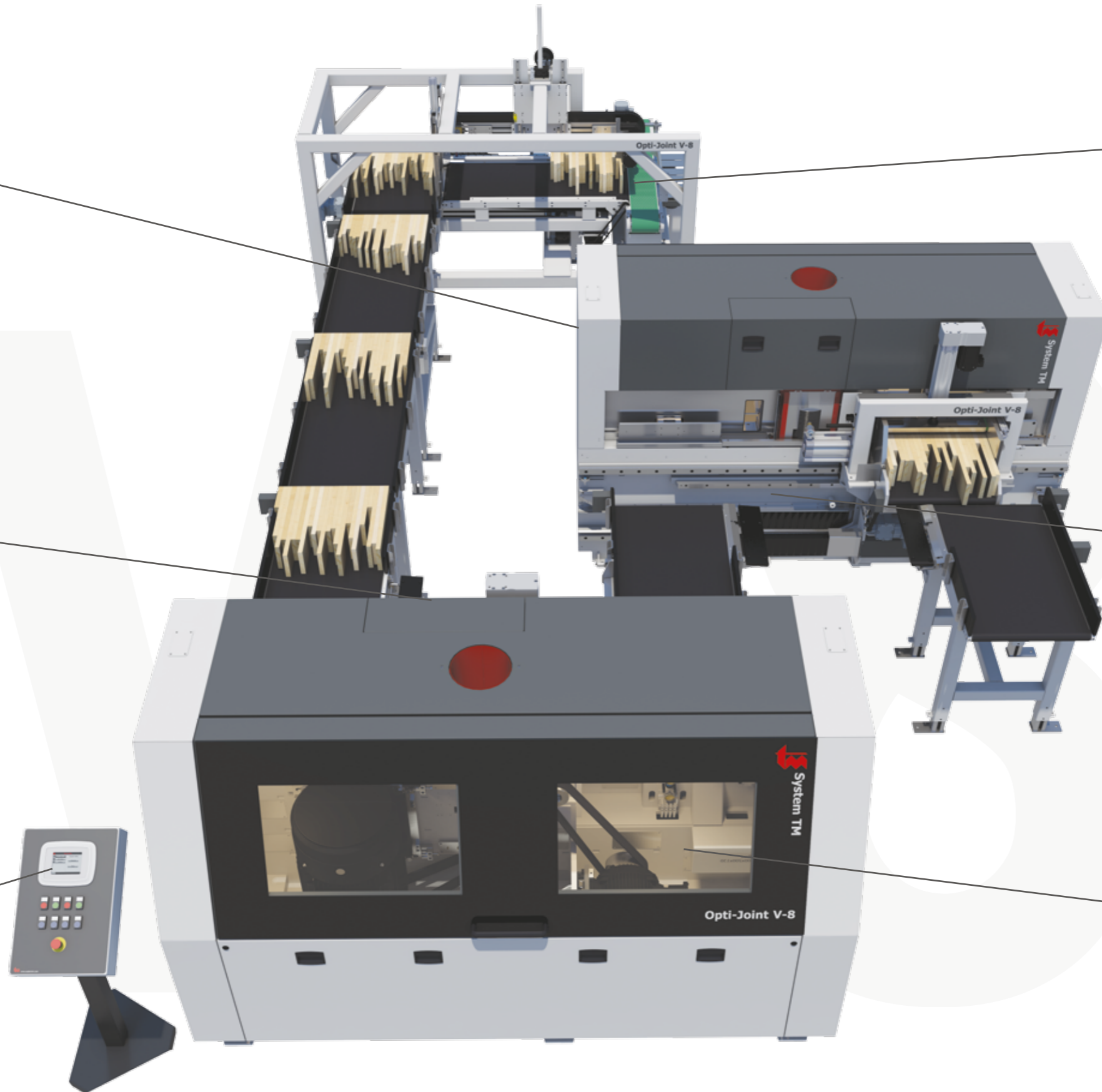
► The heavy-duty shaper units of the finger-jointing machine are manufactured and machined in one piece, which provides an exceptionally rigid frame of high stability and precision for the tooling.



► Component glue processing. System TM collaborates with all leading suppliers of glue application. Every system is determined in close collaboration with every customer and glue application supplier.



► Touch screen which includes an extensive range of machine and production statistics, quick alarm overview. Quick, easy and accurate production change-over between fixed parameter sets per workpiece dimension.



► Continuous servo-driven and synchronized transfer of workpiece batches, workpiece separation and feeding of workpieces to the pre-press. Very exact and steady feeding of workpieces to the pre-press at a high speed.



► The shaper frame supports the linear guides carrying the servo-driven shaper trolley throughout the entire transportation process. It ensures steady and precise movement at a high speed.



► Fast and accurate adjustment of scoring, hogging and shaping tools. System TM collaborates with all leading tool suppliers. Each tool solution is determined in close collaboration with every customer and tool supplier.



# Opti-Joint Press Details



▶ Automatic variable speed regulation of pre-press based on the buffer size of workpieces. This ensures continuous high capacity flow, thus minimizing the occurrence of stops



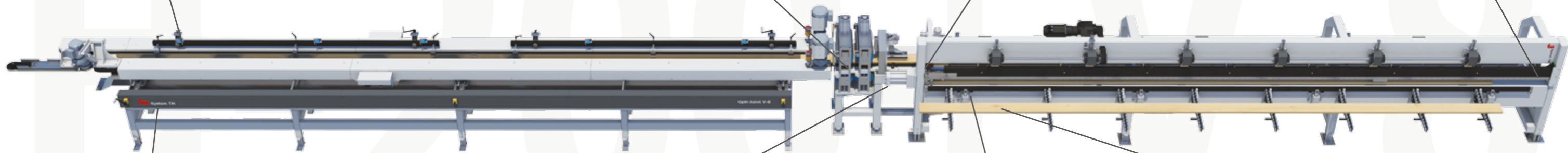
▶ Double set of top and bottom drum motors which include pneumatic brake units. These secure fast and reliable pre-pressing of all joints.



▶ Two channel press system to achieve high capacity. During final pressing of a workpiece, the subsequent workpiece is being prepared to ensure full utilization of the hydraulic press.



▶ Pre-press and press frame manufactured in heavy-duty design to prevent deflection during operations.



▶ Pre-alignment and buffer zone. Two high-speed guiding chains: one fixed and one moveable. Furthermore, top and bottom guiderails of stainless steel to ensure correct positioning of workpieces before pre-press.



▶ Servo driven heavy-duty top bar, for minimum movement, correct pressure force, high capacity and easy to adjust/change from the operator panel.



▶ Cross-cut saw which includes fixed positioning of the workpieces for the purpose of pre-cutting to lengths before press station.



▶ Hydraulic press station for strong and correct press force. To keep workpieces from shifting position during the press process, they are supported by mechanical guiderails from all sides.

# Opti-Joint Solution

## Material handling for Opti-Joint H-200 and Opti-Joint V-8

Automating the material handling of workpieces before and after the machines enables the utilization of the full capacity of the Opti-Joint H-200 and Opti-Joint V-8. Thus, this also minimizes the required number of operators. With System TM's material handling system, automation is easily achieved in both existing and new machines.

An essential role of System TM's high-capacity material handling solutions is to provide exceptionally high machine utilization with a minimum use of operators. This is achieved as a result of our software solutions, as well as our ability to integrate and combine different machine modules. It is also a result of our experience with high-capacity handling of workpieces in continuous flows. To ensure continuous high capacity throughout each workday, an integration of all equipment surrounding the finger-jointing machine must be made.

Opti-Feed model H-200



▶ High-speed feeding of random length workpieces into the lug chain of the finger-jointing machine.

Opti-Feed model L-200



▶ High speed single piece feeding of random length workpieces in a continuous flow compare to the capacity of the finger-jointing machine.

Opti-Feed model Spin Feeder



▶ High-speed alignment & feeding unit of random length workpieces.

Opti-Stack model 6000

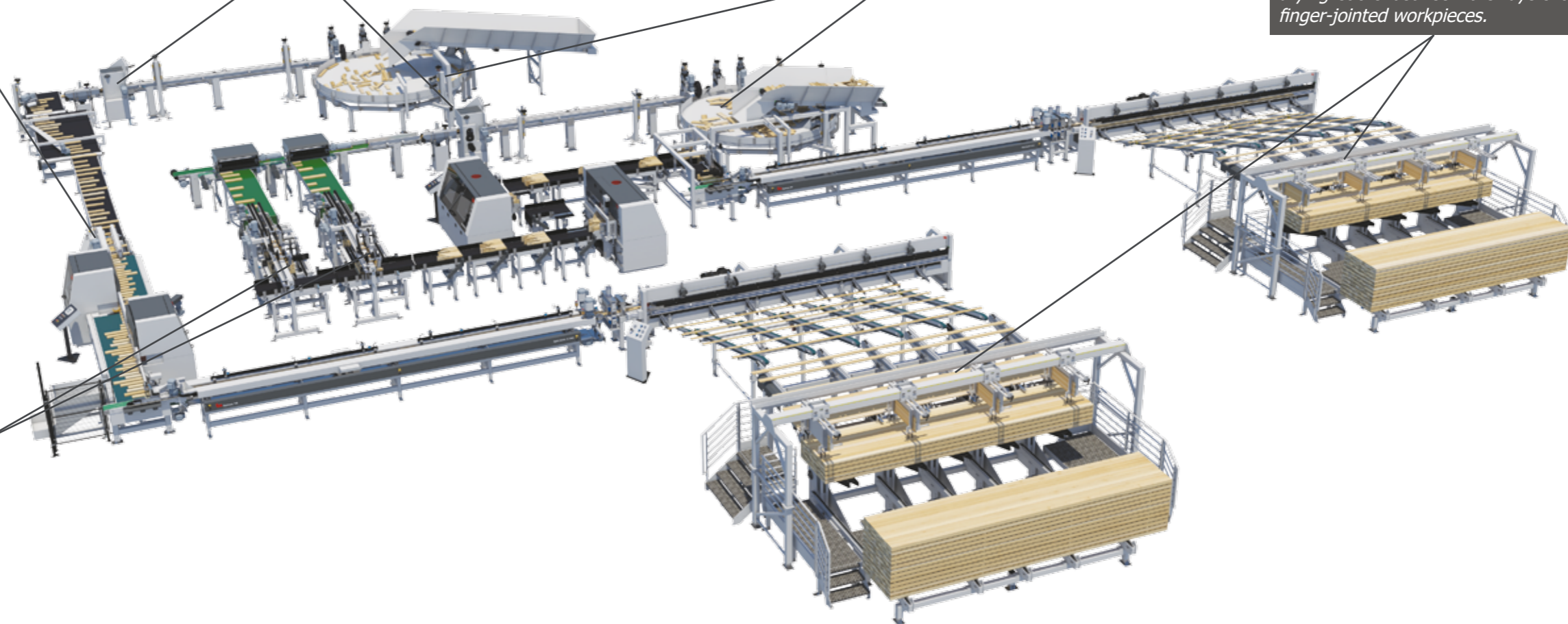


▶ Automatic stacking machine which stacks finger-jointed workpieces with one or multiple lumber lines, and automatically places stabilizing/drying sticks between the layers of finger-jointed workpieces.

Opti-Feed model V-100



▶ A high-speed batch creating system, which loads workpieces into batches in vertical positions. Then, batches of workpieces are ready to be fed into vertical finger-jointing machine(s).





## Overview of the data for Opti-Joint H-200 & V-8

	Opti-Joint H-200	Opti-Joint V-8
Workpiece length	min. 110 mm - max. 900 mm	min. 150 mm - max. 1000 mm
Workpiece width	min. 40 mm -max. 152 mm (203 mm)	min. 40 mm - max. 200 mm
Workpiece thickness	min. 18 mm - max. 50 mm (72 mm)	min. 18 mm - max. 75 mm
Workpiece length (after finger joint)	min. 2,000 mm - max. 6,100 mm (7,200 mm)	min. 2,000 mm - max. 6,100 mm (7,200 mm)
Max. cross area softwood	115 cm <sup>2</sup> (at 6.35 -11 mm jointing length)	115 cm <sup>2</sup> (at 4-11 mm jointing length)
Option	140 cm <sup>2</sup> (at 15-20 mm jointing length)	140 cm <sup>2</sup> (at 15-20 mm jointing length)
Max. cross area hardwood	90 cm <sup>2</sup> (at 6.35 -11 mm jointing length)	90 cm <sup>2</sup> (at 4-11 mm jointing length)
Option	105 cm <sup>2</sup> (at 15-20 mm jointing length)	105 cm <sup>2</sup> (at 15-20 mm jointing length)
Max. end press power	141 kN	141 kN
Shaper spindle size (standard)	50 mm	50 mm
Shaper tool diameter	228-267 mm	250 mm
Max. scoring tool diameter	200 mm	200 mm
Max. hogging tool diameter	250 mm	250 mm
Press cycles per minute (pneumatic)	12	12
Press cycles per minute (servo)	14	14

\* ( ): Additional options

All of the above data can be customized upon request

## System TM A/S

All products and system solutions from System TM can be equipped with an automatic handling or scanning system for best lumber utilization and capacity, with a minimum use of labor power.

In order to meet all customer demands, our range of material handling systems consist of both standard solutions and fully customized system solutions.



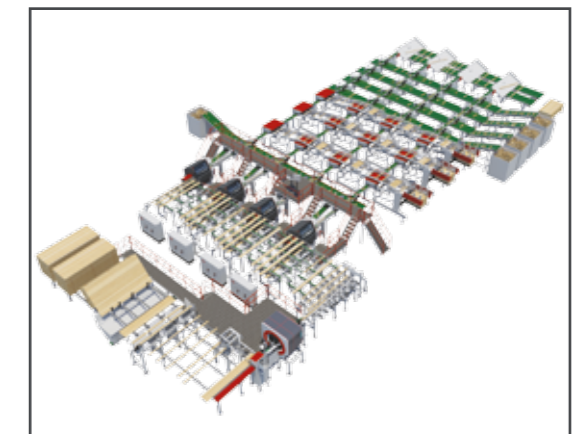
**Opti-Feed**  
Automated feeding systems



**Opti-Kap**  
Optimizing cross-cut saws



**Opti-Stack**  
Automated stacking systems



**Opti-Solution**  
Customized system solutions

# System TM service

## Optimal performance with a strong service- and support team

System TM service is a key strategic business unit. The service department focuses on providing you with service and support and we continuously develop our services to meet your requirements.

System TM service offer you services to ensure uninterrupted operation, with the best possible productivity and utilization. Systematic maintenance minimizes production downtimes, and ensures smooth operation with minimum risk of surprises.

System TM service is a team of professionally educated, trained and experienced service engineers and technicians ready to provide full technical support and services. With more than 40 years of experience designing, building, integrating and maintaining automated wood material handling systems, System TM is highly qualified to offer total service and support.

## This includes:

- ▶ Service and maintenance contracts
- ▶ Customized spare part kit for each customer to give a successful start
- ▶ Modification, upgrading and extension of existing machines, controls and software
- ▶ Relocation, renovation, installation and start-up of machine installations
- ▶ Production and system analysis and optimization
- ▶ Staff/operator education on how to handle and maintain the machines
- ▶ Advisory and consultancy service
- ▶ Spare parts and enhancements
- ▶ Warranty
- ▶ Helpdesk and online telephone support - 24 hours worldwide





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(Not available for sale in Germany)



**Optimization of staff and wood resources**