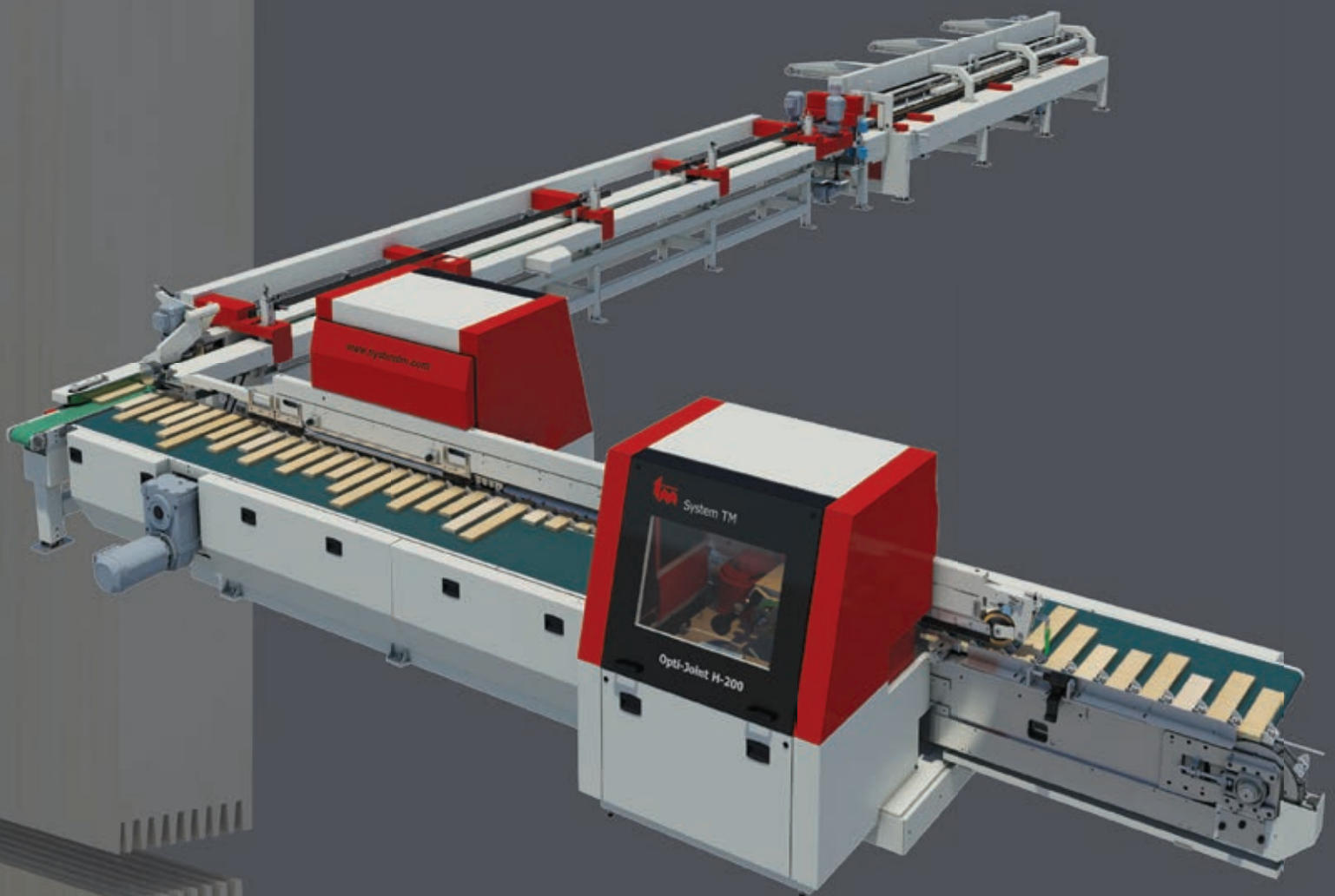




# Opti-Joint

Automated finger jointing systems



**Optimization of staff and wood resources**

**03** Automated finger jointing systems

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**04** Opti-Joint H-200

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**06** Shaper Details

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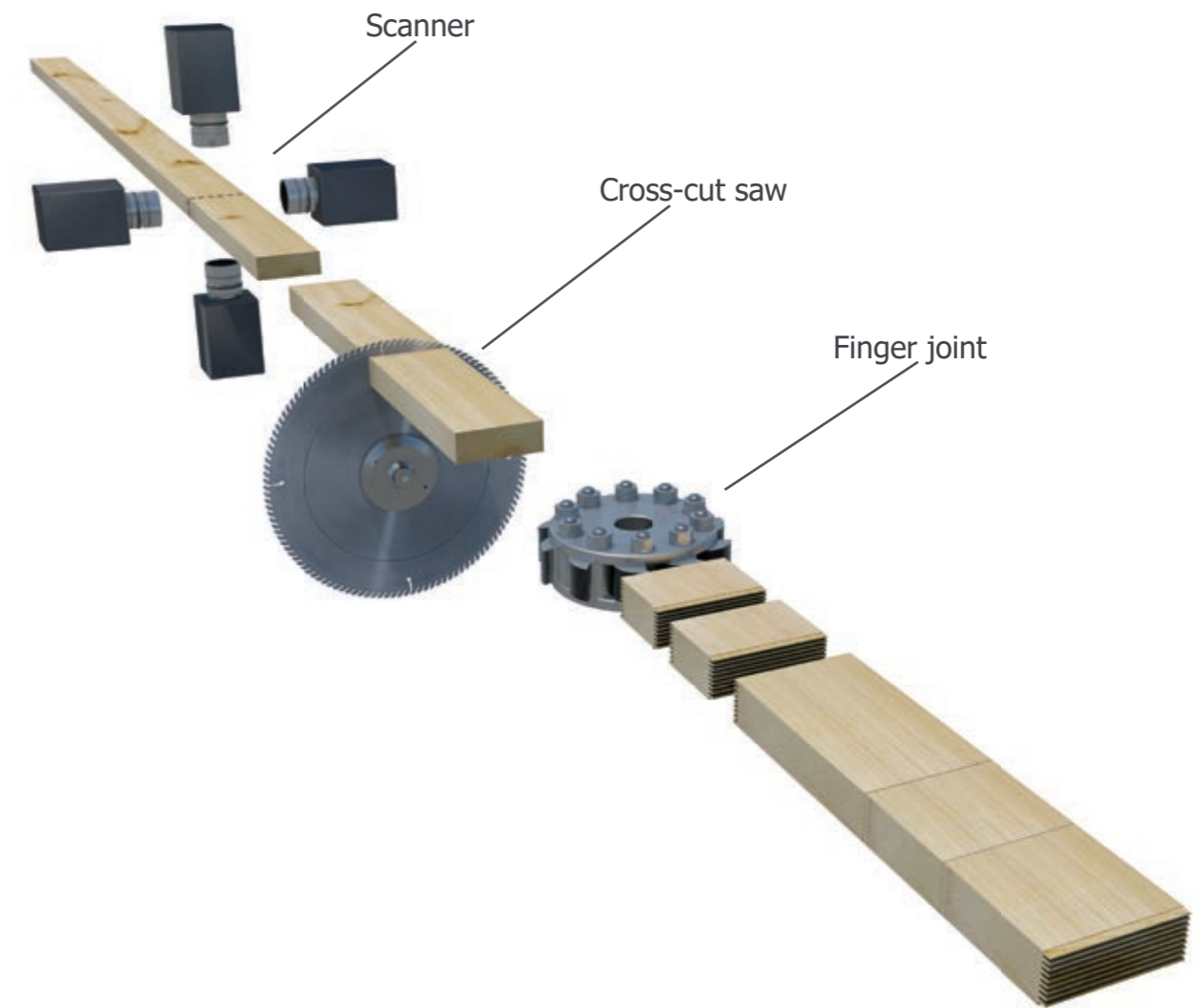
**14** System TM service

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## Finger jointing machines

An Opti-Joint H-200, horizontal finger jointing machine from System TM, ensures optimal utilization of your staff and wood resources. At a very high capacity, the Opti-Joint H-200 joints uniform quality workpieces into a customized quality board.

The machine technologies from System TM ensure all our customers a high return on their investment when upgrading their lumber to a specific customized grade for strength, quality and visual look of the end product. The finger jointing process starts with raw material being scanned, cross-cut into the right quality and finger jointed together to 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 both in soft- and hardwoods. The finger-jointing machine is manufactured in a particularly durable fashion with mechanical and electrical components of a very high quality.

System TM has great experience with handling of small workpieces at an extremely high capacity, both in a continuous steady flow during different processes, and from one process to another. The mechanical- and software control design of the Opti-Joint H-200 horizontal finger jointing machine, is developed based on this experience.

The high-speed transport of the workpieces is very secure during the jointing, gluing and pressing processes. This minimizes stops during the transportation of the workpieces, achieving a high performance capacity and a high quality jointing.

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

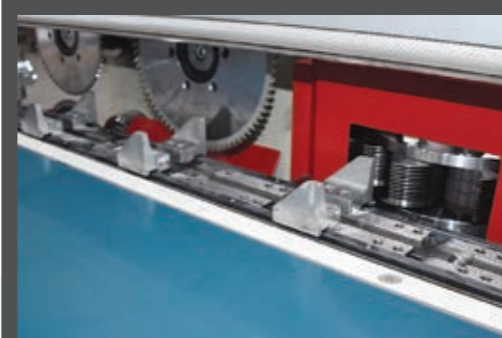
- ▶ High capacity including maximum precision and jointing quality
- ▶ Intelligent control system for high machine utilization and performance
- ▶ Complete hard- and software integration between all functions of the machine/line
- ▶ Automatic line control and adjustments from one control and operator interface
- ▶ Extensive range of production statistics available
- ▶ Can be upgraded to work with automatic infeed (Opti-Feed) and stacking (Opti-Stack) systems
- ▶ Can be integrated in a direct line with optimizing cross-cut system including scanning
- ▶ High focus on the operator's safety and machine reliability



# Opti-Joint H-200 Shaper Details



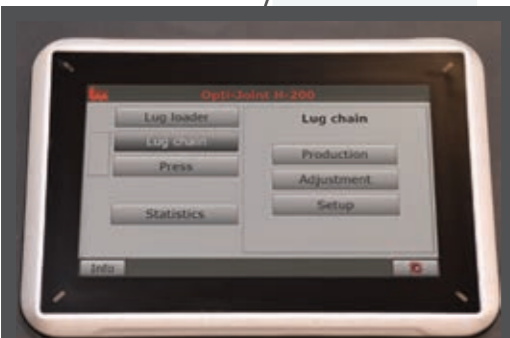
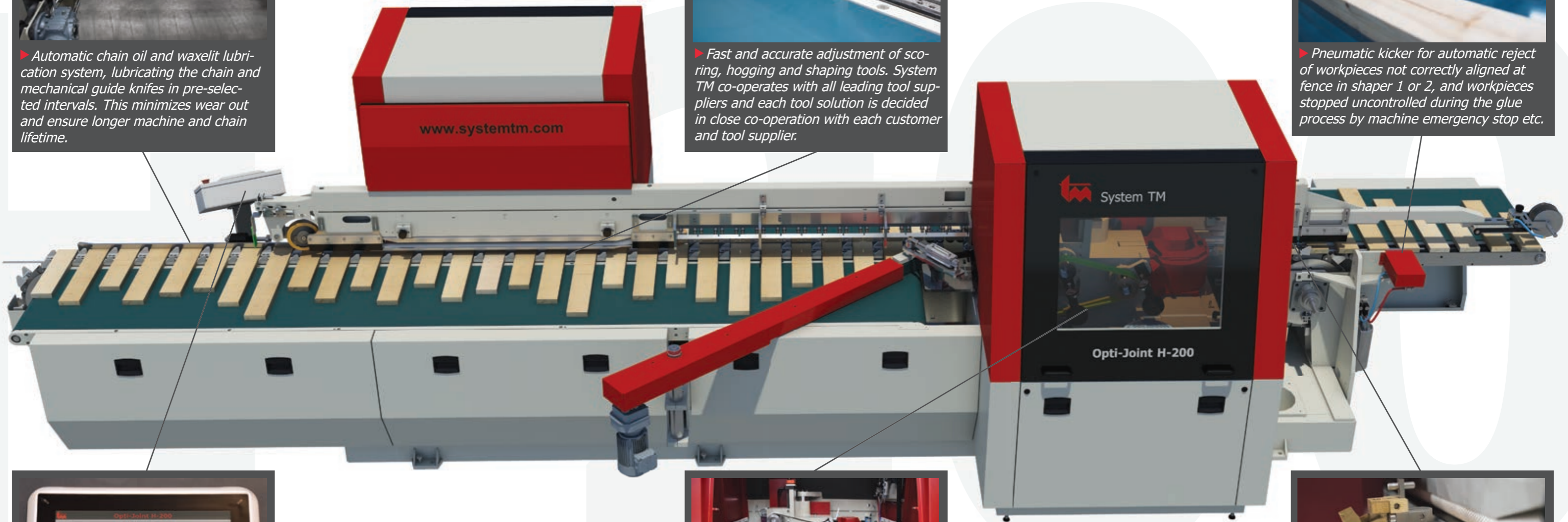
► Automatic chain oil and waxlit lubrication system, lubricating the chain and mechanical guide knives in pre-selected intervals. This minimizes wear out and ensure longer machine and chain lifetime.



► Fast and accurate adjustment of scoring, hogging and shaping tools. System TM co-operates with all leading tool suppliers and each tool solution is decided in close co-operation with each customer and tool supplier.



► Pneumatic kicker for automatic reject of workpieces not correctly aligned at fence in shaper 1 or 2, and workpieces stopped uncontrolled during the glue process by machine emergency stop etc.



► 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 consists of scoring, hogging and shaping units. High precision adjustment for all units and belt drive supervision for tool protection.



► Component glue processing. System TM co-operates with all leading suppliers of glue application and every system is decided in close co-operation with each customer and glue application supplier.

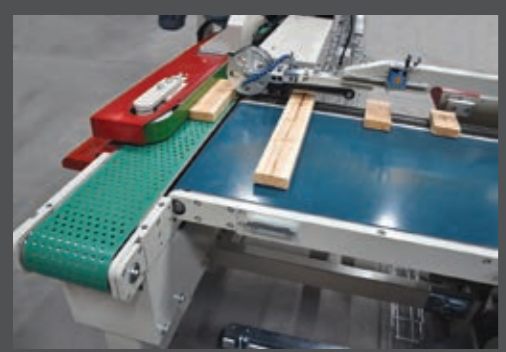
[www.systemtm.com](http://www.systemtm.com)

System TM

Opti-Joint H-200



# Opti-Joint H-200 Press Details



▶ Automatic high-speed vacuum transfer and driven alignment belt for a secure transfer of workpieces from the shaper units into the pre align- and press area.



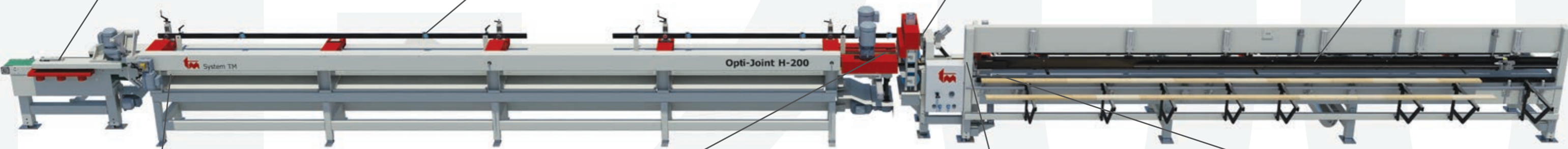
▶ Automatic variable speed regulation of pre-press according to the buffer size of workpieces. This is to insure a continuous high capacity flow, without any unnecessary stops.



▶ Top and bottom driven rollers, one fixed and one moveable, and a pneumatic brake unit secure fast and reliable pre-pressing of all joints.



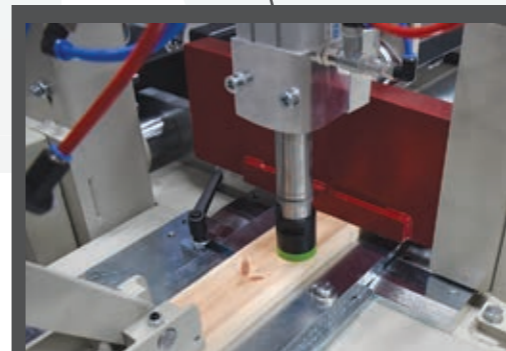
▶ Two channel press system to achieve high capacity. During final pressing of a workpiece, the subsequent workpiece is being prepared to ensure full utilization of the hydraulic press.



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



▶ Driven side rollers for exact centering of workpieces before pre-press to achieve a high quality jointing process.



▶ Cross-cut saw including fixed positioning of the workpieces, for pre-cut to lengths before press station.



▶ Hydraulic press station for strong and correct press force. To avoid any workpiece movement during the press process, the workpieces are supported by mechanical guiderails from all sides.

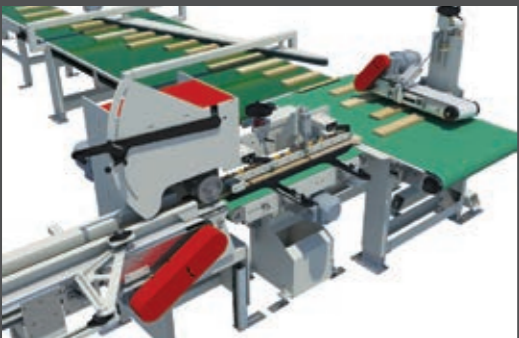
# Opti-Joint Solution

## Material handling for Opti-Joint H-200

To utilize the full capacity of the Opti-Joint H-200, it is necessary to automate the material handling of the workpieces before and after the machine. This will also minimize the required number of operators. With System TM's material handling system this automation is easily done, both on existing as well as on new machines.


One of the main design focuses behind the high capacity material handling solutions from System TM, is to achieve an extremely high machine utilization with a minimum use of operators. This is due to our soft-ware solutions and ability to integrate and combine different machine modules, but also because of our experience with high-capacity handling of workpieces in a continuous flow. It is important to integrate all equipment surrounding the finger jointing machine, to ensure a continuous high capacity throughout each workday.

**Opti-Feed model Index Feeding**



▶ 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.

**Cross-cut unit**




▶ Adjustable cross-cut unit for trimming and cut to length applications including lumber deviation.

**Opti-Stack with stick magazines**

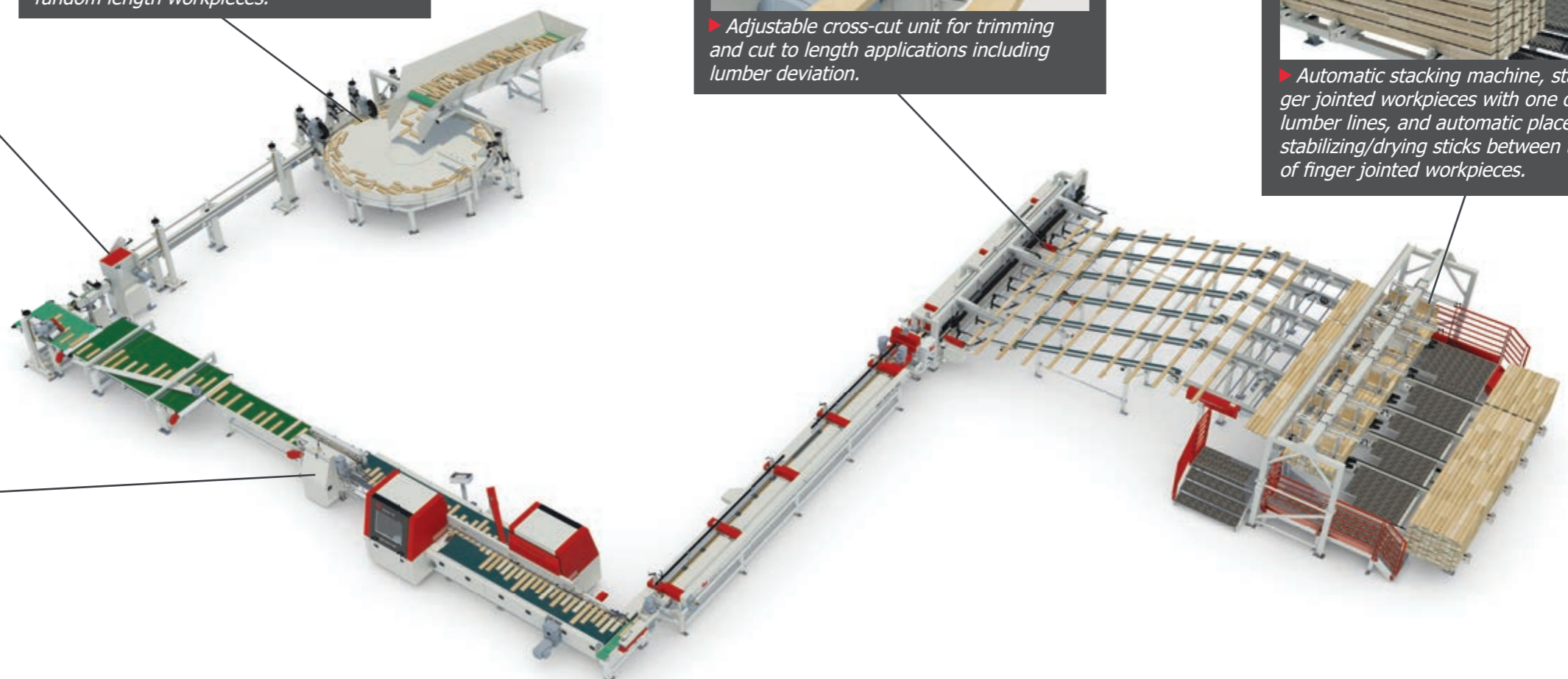


▶ Automatic stacking machine, stacking finger jointed workpieces with one or multiple lumber lines, and automatic placement of stabilizing/drying sticks between the layers of finger jointed workpieces.

**Opti-Feed model H-200**



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



## Overview of the data for Opti-Joint H-200

Workpiece length	min. 110 mm - max. 900 mm
Workpiece width	min. 37 mm -max. 152 mm (203 mm)
Workpiece thickness	min. 19 mm (16 mm) - max. 50 mm (72 mm)
Workpiece length (after finger joint)	min. 2,000 mm - max. 6,100 mm (7,200 mm)
Max. cross area softwood	100 cm <sup>2</sup> (at 10-11 mm jointing length)
Option	120 cm <sup>2</sup> (at 10-11 mm jointing length)
Max. cross area hardwood	80 cm <sup>2</sup> (at 10-11 mm jointing length)
Option	96 cm <sup>2</sup> (at 10-11 mm jointing length)
Max. end press power	145 kN
Shaper spindle size (standard)	50 mm
Shaper tool diameter	228-267 mm
Max. scoring tool diameter	200 mm
Max. hogging tool diameter	250 mm
Press cycles per minute (pneumatic)	12
Press cycles per minute (servo)	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.



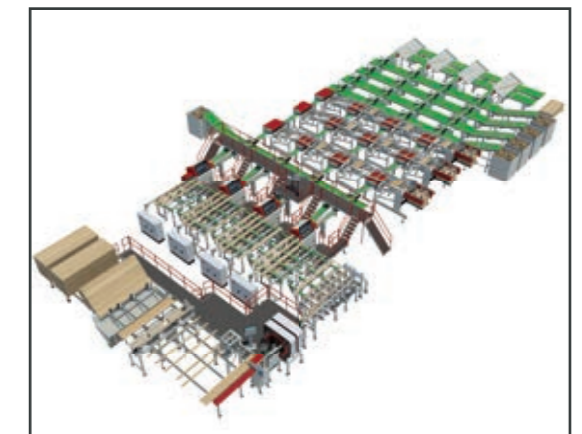
**OPTI-FEED**  
Automated feeding systems



**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 35 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







System TM A/S  
Skovdalsvej 35, P.O. Box 249  
DK-8300 Odder, Denmark

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(Office) + (45) 86 54 33 55  
(Fax) + (45) 86 54 32 19  
E-mail: [tm@systemtm.com](mailto:tm@systemtm.com)  
[www.systemtm.com](http://www.systemtm.com)



**Optimization of staff and wood resources**