Opti-Joint

Automated finger-jointing systems

Opti-Joint H-200
Opti-Joint V-8

Optimization of staff and wood resources

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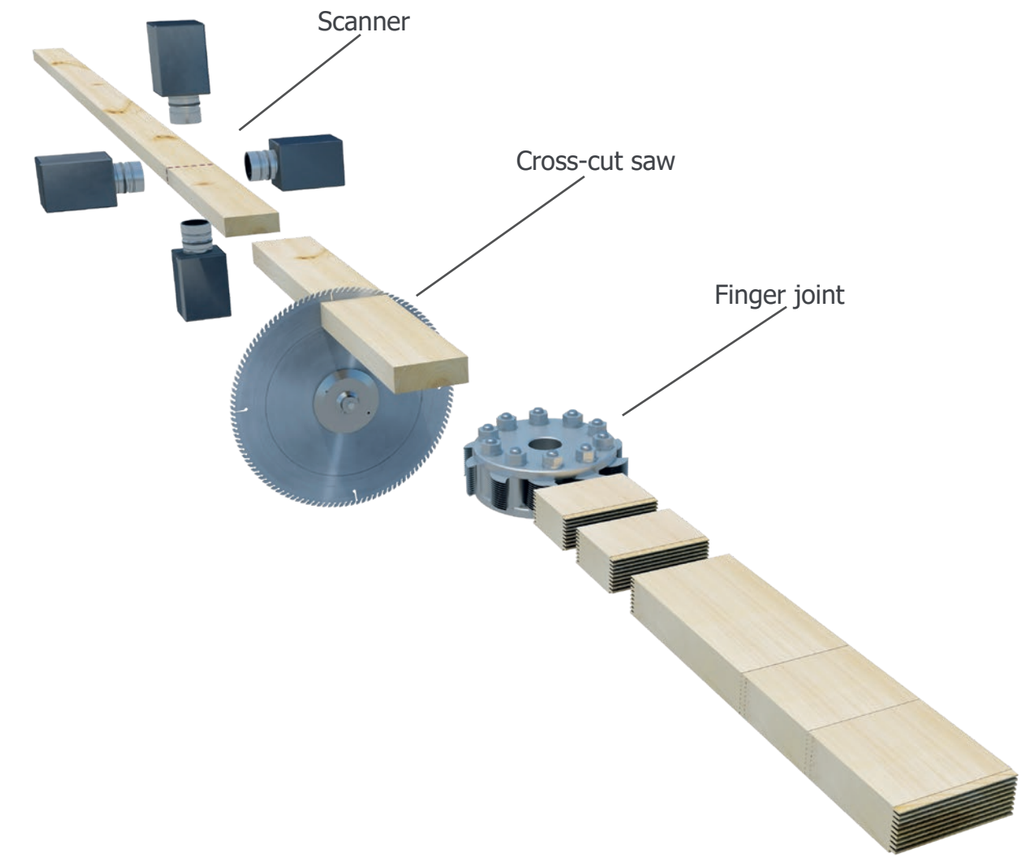
Finger-jointing machines

A System TM Opti-Joint horizontal or vertical finger-jointing machine provides maximum utilization of staff and wood resources. The Opti-Joint finger-jointing machines joint uniform-quality workpieces into customized quality boards at a high capacity.

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



Make a wise move

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

Opti-Joint H-200

Opti-Joint H-200 - a horizontal finger-jointing machine

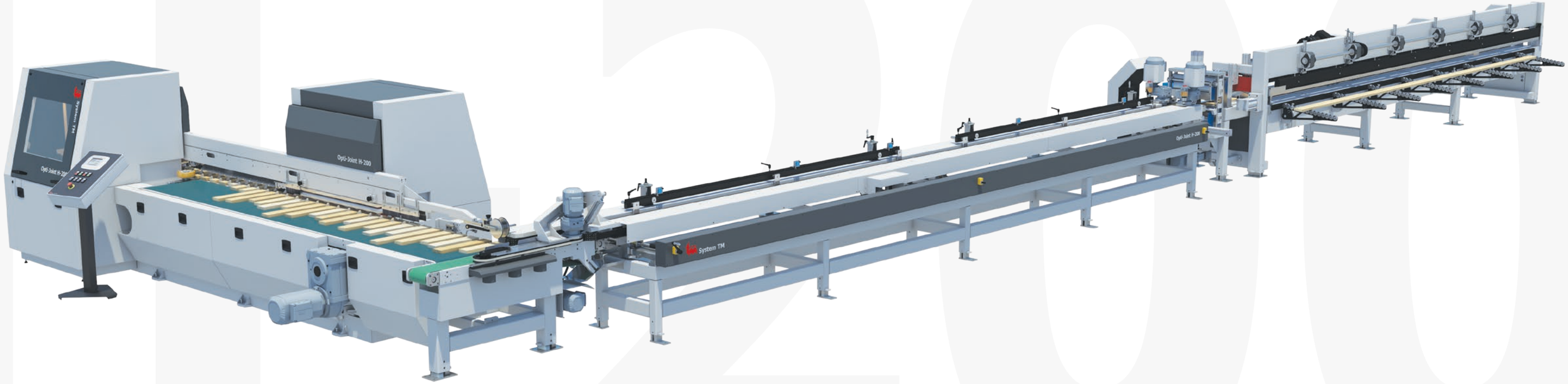
The Opti-Joint H-200 is a heavy-duty horizontal finger-jointing machine, characterized by high machine utilization and production capacity of softwoods and hardwoods. The Opti-Joint H-200 is designed with high quality mechanical and electrical components.

System TM has broad experience in handling small workpieces at high capacity, whether it is continuous steady flows of small workpieces throughout different processes, or flows from one machine to another. The mechanical and software control design of the Opti-Joint H-200 horizontal finger-jointing machine is also based on System TM's broad experience.

The high-speed transport of workpieces is safe and secure during the jointing, gluing and pressing processes. This minimizes stops as workpieces are transported and maximizes performance, capacity and jointing quality.

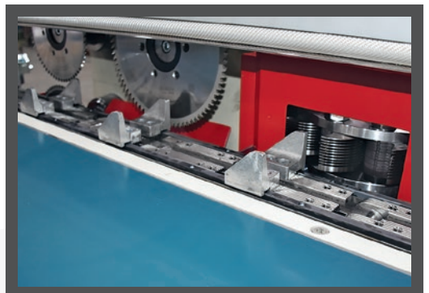
Why choose a System TM Opti-Joint H-200?

- High capacity, maximum precision and jointing quality
- Intelligent control system to ensure maximum machine utilization and performance
- Complete hardware and software integration between all functions of the machines/line
- Automatic line control and adjustment from a single control and operator interface
- Access to a wide range of production statistics
- Can be upgraded to operate with automatic infeed (Opti-Feed), cross-cutting (Opti-Kap), stacking (Opti-Stack) and scanning technology
- High attention to operator safety and machine reliability



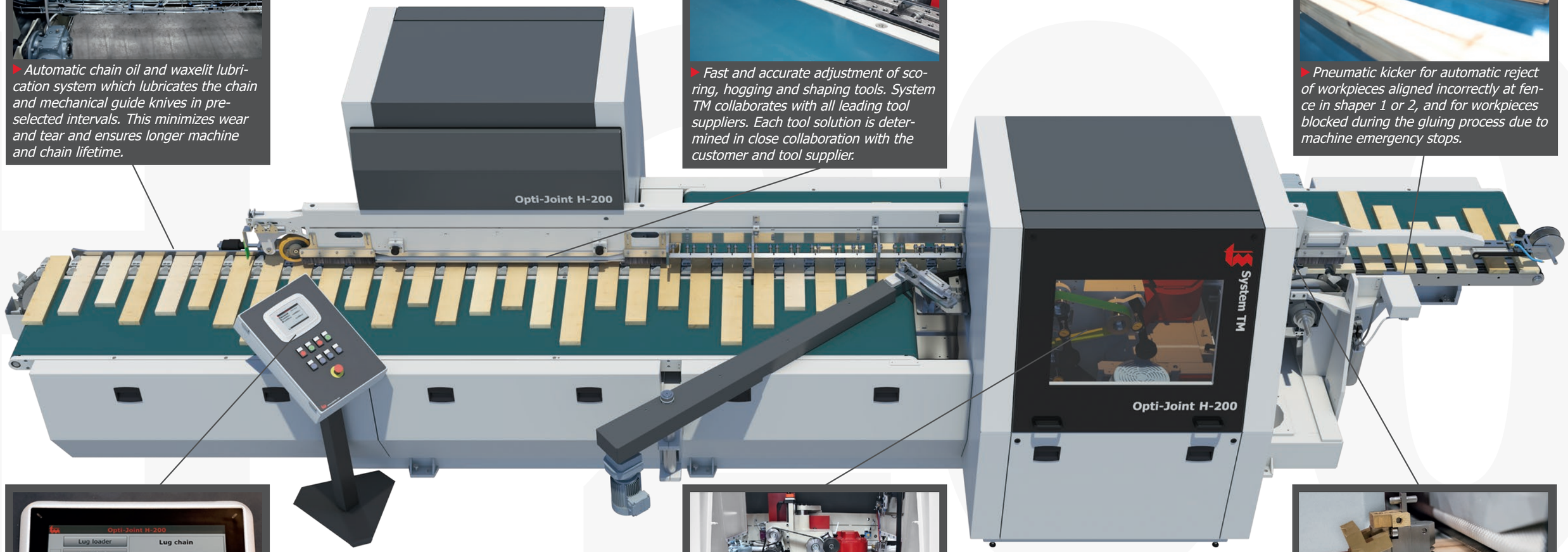
Opti-Joint H-200 Shaper Details

Automatic chain oil and waxelit lubrication system which lubricates the chain and mechanical guide knives in pre-selected intervals. This minimizes wear and tear 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 the customer and tool supplier.

Pneumatic kicker for automatic reject of workpieces aligned incorrectly at fence in shaper 1 or 2, and for workpieces blocked during the gluing process due to machine emergency stops.



Multi touch screen operator panel displaying a wide range of machine and production statistics. Includes System TM's software solution with automatic stop position for shaping and gluing control of workpieces.

The heavy cast iron construction of the shaper body ensures high stability. It consists of scoring, hogging and shaping units. Also, 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 the customer and glue application supplier.

Opti-Joint V-8

Opti-Joint V-8 - a vertical finger-jointing machine

The Opti-Joint V-8 is a high speed vertical finger-jointing machine that ensures high quality finger-jointing, maximum machine utilization, and excellent production capacity of both softwoods and hardwoods.

The Opti-Joint V-8 is designed with high quality mechanical and electrical components to provide a high level of stability and precision in the tooling and jointing of various workpiece dimensions.

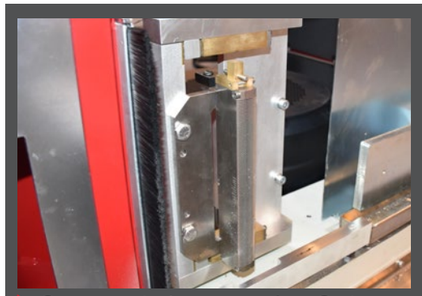
The mechanical and software control design of the Opti-Joint V-8 vertical finger-jointing machine is developed and based on System TM's broad experience in handling small workpieces at high capacity. The Opti-Joint V-8's intelligent software minimizes machine stops and guarantees high machine utilization in terms of planned operation time.

Why choose a System TM Opti-Joint V-8?

- ▶ High capacity, maximum precision and jointing quality
- ▶ Intelligent control system to ensure maximum machine utilization and performance
- ▶ Complete hardware and software integration between all functions of the machines/line
- ▶ Automatic line control and adjustment from a single control and operator interface
- ▶ Access to a wide range of production statistics
- ▶ Can be upgraded to operate with automatic infeed (Opti-Feed), cross-cutting (Opti-Kap), stacking (Opti-Stack) and scanning technology
- ▶ High attention to operator safety and machine reliability

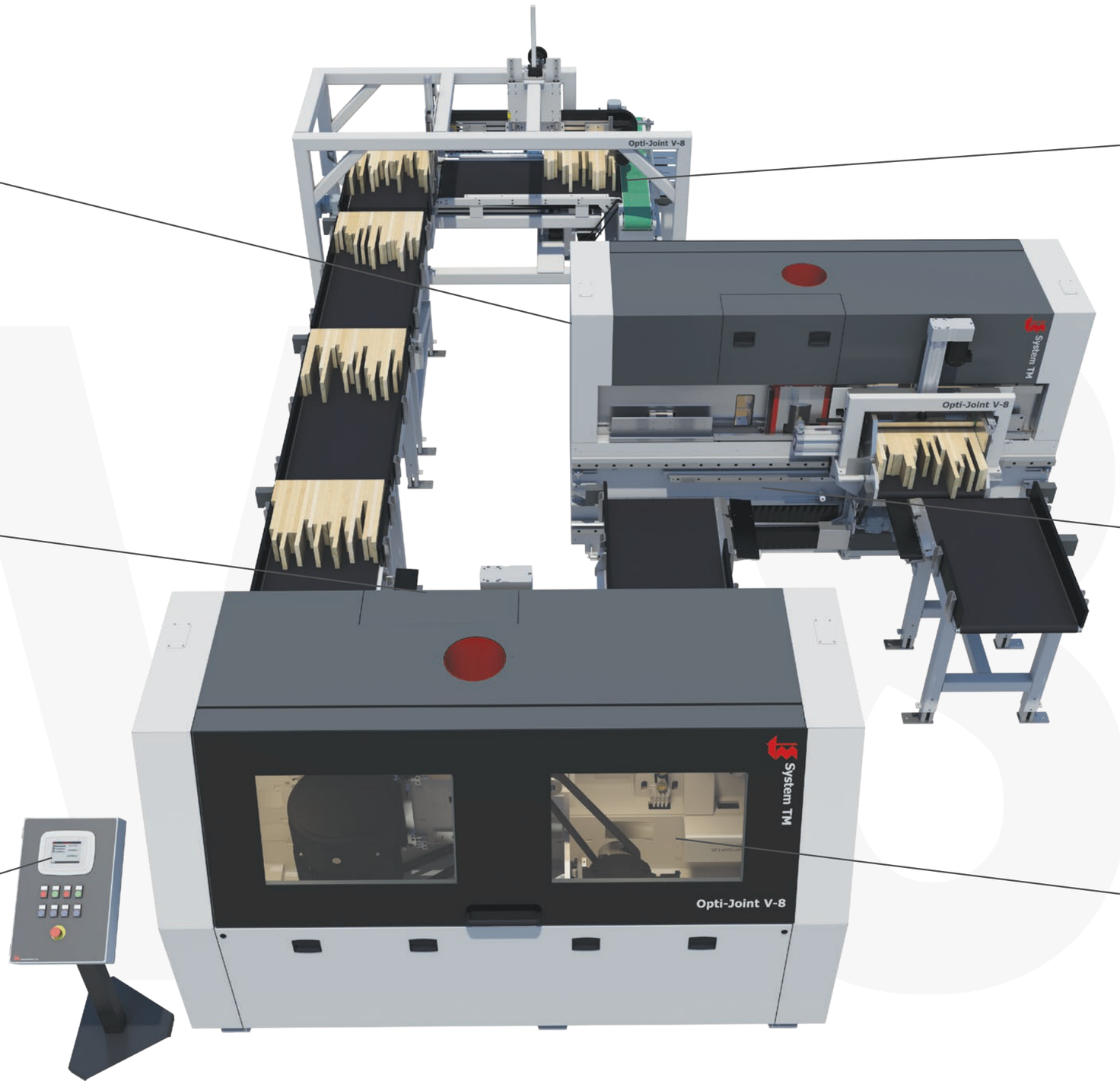
Opti-Joint V-8 Shaper Details

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 tooling.



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

Touch screen operator panel displaying a wide range of machine and production statistics, and quick alarm overview. Quick, easy and accurate production changeover between fixed parameter sets of each workpiece dimension.



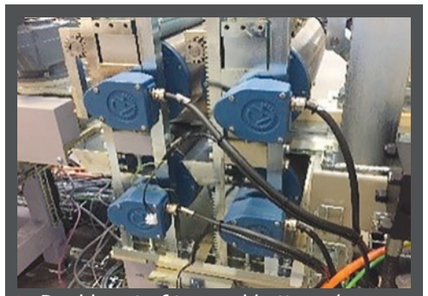
Continuous servo-driven and synchronized transfer of workpiece batches, workpiece separation and feeding of workpieces to the pre-press. Precise and steady feeding of workpieces to the pre-press at high speed.

The shaper frame supports the linear guides carrying the servo-driven shaper trolley throughout the entire transportation process. This ensures steady and precise movement at 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 the customer and tool supplier.

Opti-Joint Press Details

Automatic variable speed regulation of pre-press based on the buffer size of workpieces. This provides continuous high capacity flow and minimizes stops.



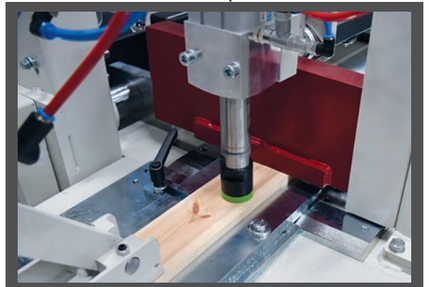
Double set of top and bottom drum motors including pneumatic brake units. This provides fast and reliable pre-pressing of all joints.

Two channel press systems ensure high capacity. During the final pressing of workpieces, the workpieces next in line are prepared in order to achieve full utilization of the hydraulic press.

Heavy-duty pre-press and press frame to prevent deflection during operation.

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

Servo driven, heavy-duty top bar ensures minimum movement, correct pressure force, high capacity and is easily adjustable from the operator panel.



Cross-cut saw including fixed positioning of workpieces to pre-cut them into lengths before the press station.

Hydraulic press station for high and correct press force. Workpieces are supported by mechanical guiderails from all sides to keep them from shifting during the press process.

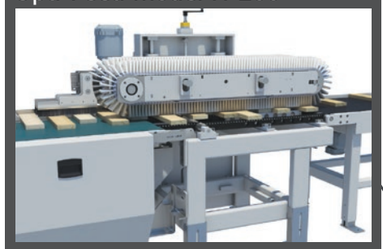
Opti-Joint Solution

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

Utilizing of the full capacity of the Opti-Joint H-200 and Opti-Joint V-8 is achieved by automating material handling before and after the machines. As a result, the number of needed operators is kept to a minimum. With System TM's material handling system, automation can easily be achieved in both existing and new machines.

System TM's high-capacity material handling solutions provide high machine utilization with a minimum use of operators. This is achieved thanks to our software solutions, our ability to integrate and combine different machine modules, and our experience with handling workpieces in continuous flows and high capacity. Integrating all equipment surrounding the finger-jointing machine is necessary to ensure continuous high capacity.

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

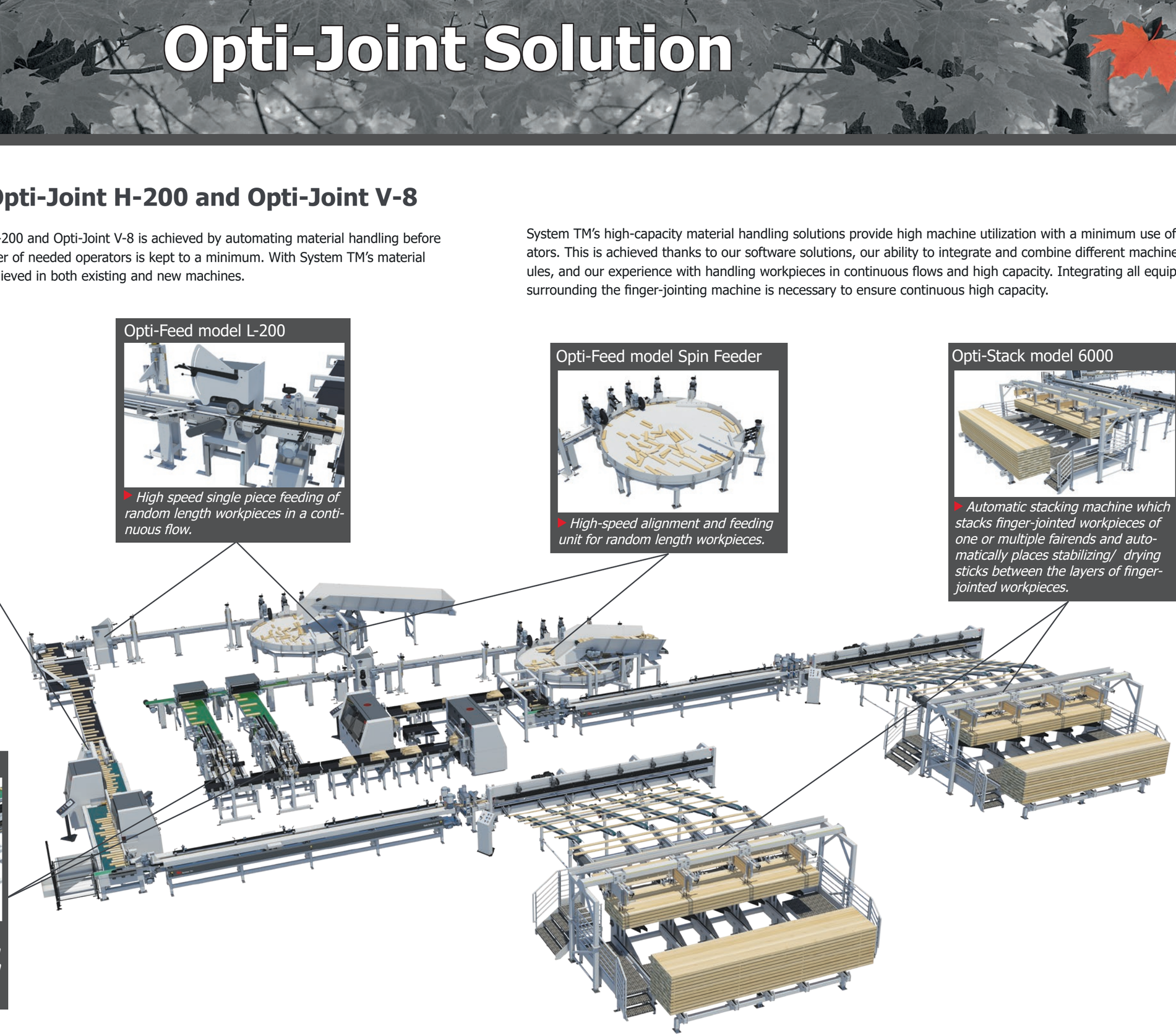
High speed single piece feeding of random length workpieces in a continuous flow.

Opti-Feed model Spin Feeder

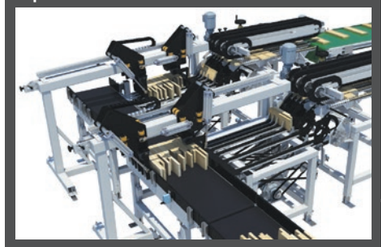
High-speed alignment and feeding unit for random length workpieces.

Opti-Stack model 6000

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



Opti-Feed model V-100



A high-speed, batch making system loads workpieces into batches in vertical positions, and prepares them for feeding to vertical finger-jointing machine(s).

Technical Data

Opti-Joint H-200 & V-8 data overview

	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^2 (at 6.35 -11 mm jointing length)	115 cm^2 (at 4-11 mm jointing length)
Option	140 cm^2 (at 15-20 mm jointing length)	140 cm^2 (at 15-20 mm jointing length)
Max. cross area hardwood	90 cm^2 (at 6.35 -11 mm jointing length)	90 cm^2 (at 4-11 mm jointing length)
Option	105 cm^2 (at 15-20 mm jointing length)	105 cm^2 (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

Additional Products

System TM A/S

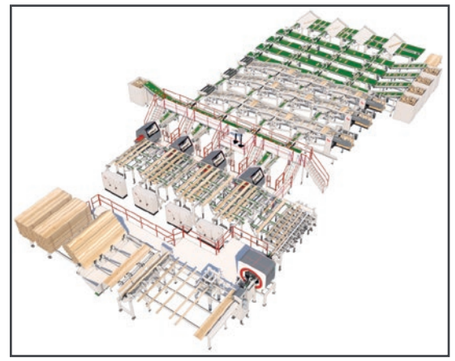
System TM products and system solutions can be equipped with automatic handling or scanning systems for best lumber utilization and capacity with minimum use of labor power.

In order to meet all customer demands, our selection of material handling systems consists of both standard and fully customized 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 thanks to a strong service and support team

System TM's service is a key strategic business unit. Our service department constantly develops its service to meet customer wishes and to provide exceptional service and support.

System TM's service and support team ensures high uptime, productivity, and utilization. Systematic maintenance minimizes production downtime, and ensures smooth operation with minimum risk of unexpected machine break-downs.

System TM's service and support team consists of highly educated, trained, and experienced service engineers and technicians. With more than 40 years of experience in designing, building, integrating and maintaining automated wood material handling systems, System TM is a highly qualified provider of service and support.

This includes:

- Service and maintenance contracts
- A customized spare part kit for each customer to ensure a succesful 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 machines
- Advisory and consultancy services
- Spare parts and enhancements
- Warranty
- Helpdesk and online telephone support - 24 hours worldwide

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(Not available for sale in Germany)

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