



# Opti-Kap

Optimizing cross-cut systems

Opti-Kap 1000  
Opti-Kap 3000  
Opti-Kap 5000



**Optimization of staff and wood resources**

**03** Optimizing cross-cut saw series

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### Optimizing cross-cut saw series

An optimizing cross-cut system ensures you optimal utilization of your staff and wood resources, with a minimum of waste. This will provide a higher yield and increased efficiency in your production.

The Opti-Kap 1000, 3000 and 5000 series are characterized by user-friendly design, focusing on easy, fast and reliable operation. The highly flexible saw automatically measures, optimizes and cuts incoming timber into components.



► **Make a wise move**

- let an Opti-Kap cross-cut saw increase your lumber utilization and capacity!!

# Opti-Kap 1000 series

## Push feed cross-cut saw with high cut accuracy and performance

High cut accuracy, durable construction and focus on easy, fast and reliable operation is what characterizes the Opti-Kap 1000 series.

The Opti-Kap 1000 series automatically recognizes the lengths as well as marked or scanned defects and cuts the workpieces into components with an extremely high accuracy. The clamping unit combines the benefits of a high efficiency "Through-Feed" with the accuracy of a "Push-Feed" cross-cut saw. Opti-Kap 1000 has a positioning accuracy of  $\pm 0.1$  mm (0.004").

Designed to meet your production requirements, Opti-Kap 1000 can be mixed and matched with a wide range of infeed (Opti-Feed) and outfeed (Opti-Stack) solutions.

Opti-Kap 1000 is an optimizing cross-cut solution, ensuring optimal utilization of your staff and wood resources with a minimum of waste. This will provide both a higher yield and increased efficiency of your production.

## Why choose an Opti-Kap 1000 cross-cut saw from System TM:

- ▶ The most heavy duty and durable push feed cross-cut saw on the market
- ▶ Excellent for use in productions where the final cut and length accuracy is of the utmost importance, for example kitchen cabinet manufacturers and architectural mouldings.
- ▶ Automatic registration of boards
- ▶ Computer network with integrated optimizing software
- ▶ Can be upgraded to work with automatic infeed (Opti-Feed), stacking (Opti-Stack) and scanning technology
- ▶ High focus on the operator's safety and machine reliability





# Opti-Kap 1000 Details



► High-precision cut accuracy. Push positioning accuracy of +/- 0.1 mm (0.004").



► Unique clamping unit secure an exact workpiece position and cut accuracy at a very high capacity.



► Heavy-duty top pressure unit and intelligent side rollers gives an exact cut and positioning of the workpieces during cross-cutting.



► The push arm is controlled by a servo driven linear module for high capacity and cut accuracy with a minimum of maintenance.



► High-speed push arm with a feeding speed of 140 m/min (460 ft/min) and return speed of 310 m/min (1,017 ft/min).



► With a return speed of 310 m/min (1,017 ft/min) the sensors registers defects, quality and measures the board length.



# Opti-Kap 3000 series

## Through-feed cross-cut saw for large workpiece dimensions

The Opti-Kap 3000 series is a heavy duty through-feed optimizing cross-cut saw, characterized by a high production capacity of all workpiece dimensions.

The optimizing cross-cut saw is manufactured in a particularly durable fashion with mechanical components of extremely high quality. In order to achieve the accuracy and capacity required in large workpiece dimensions, the saw is equipped with 6 servo driven bottom rollers and 6 pneumatically activated pressure rollers. Both the driven and the pressure rollers are double supported, to ensure maximum contact to the processed workpieces.

The Opti-Kap 3000 series automatically recognizes the lengths as well as marked or scanned defects, and cuts the workpieces into components with an accuracy of  $\pm 1$  mm (0.039") in cross-cut lengths up to 1,000 mm (39").

## Why choose an Opti-Kap 3000 cross-cut saw from System TM:

- ▶ Vertical saw blade movement controlled by a servo driven cam for a very fast and smooth cut
- ▶ Adjustable cut speed to minimize tear-outs
- ▶ Can be upgraded to work with automatic infeed (Opti-Feed), stacking (Opti-Stack) and scanning technology
- ▶ 6 heavy duty, double side supported bottom and top rollers, to achieve high capacity with an exact cut accuracy
- ▶ Fixed mechanical waste gate – for optimal and fast removal of waste and defect workpieces
- ▶ Motorised adjustment for different wood dimensions
- ▶ Designed to meet your specific production requirements which will give you the best return on investment
- ▶ High focus on the operator safety and machine reliability





# Opti-Kap 3000 Details



► A heavy-duty top pressure construction with strong double side supported top pressure rollers. These ensure maximum contact between the workpiece and the feed roller. This enables a very reliable cut precision at a high rate of acceleration and deceleration.



► The bottom feed rollers are placed high above the bed plate of the machine which allows feeding of bend or twisted timber, ensuring maximum productivity and accuracy.



► Saw blade stroke is carried out by a cam and servo motor which provide a controllable high performance and quality cutting at all times.



► Maintenance-free mechanical waste gate ensures optimal and simple removal of small waste and defect pieces inside the saw unit, guaranteeing exact sorting of the workpieces.



► The 30° angle design of the saw secure correct workpiece positioning during cross-cutting, natural gravity for simple removal of waste and defect pieces, and easy infeed of workpieces.



► A wide, servo-driven timing belt to the bottom rollers ensures accurate cutting. This heavy-duty design has proven to be extremely durable, requiring only a minimum of maintenance.

# Opti-Kap 5000 series

## Through feed cross-cut saw with high intelligence and unbeatable performance

With impressive power, intelligent performance and a high level of safety, the Opti-Kap 5000 series have changed the standards of the future optimized cross-cutting.

Designed to meet the extreme capacity performance of the Opti-Kap 5000, the cross-cut saw is manufactured in a particularly durable fashion with mechanical components of extremely high quality.

The forward motion of the workpieces inside the saw is achieved through 9 servo driven bottom rollers and 9 double pneumatically activated pressure rollers. Both the driven and the pressure rollers are double supported to ensure maximum contact to the workpieces, guaranteeing excellent accuracy and an unbeatable capacity.

The saw blade has an excentric movement driven by a servo motor, guaranteeing a smooth saw blade stroke for optimal kerfs, which minimizes the tear-outs during cross-cutting.

The Opti-Kap 5000 series automatically recognizes the lengths as well as marked or scanned defects, and cuts the workpieces into components with an accuracy of  $\pm 0.75$  mm (0.03") in cross-cut lengths up to 1,000 mm (39").

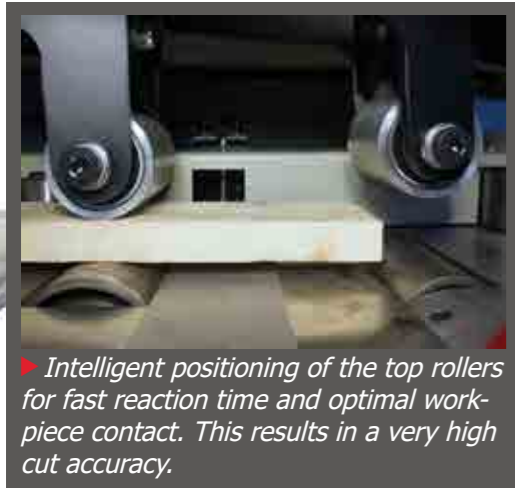
## Why choose an Opti-Kap 5000 cross-cut saw from System TM:

- ▶ Integrated infeed rollers and outfeed belt for an optimal handling of the workpieces
- ▶ Smooth excentric/circular saw blade stroke for optimal kerfs that insure a minimum of tear-outs during cross-cutting
- ▶ System TM's software control for an optimal uptime and an unbeatable capacity
- ▶ Intelligent double top pressure rollers for a precise and fast positioning of the workpieces
- ▶ Can be upgraded to work with automatic infeed (Opti-Feed), stacking (Opti-Stack) and scanning technology
- ▶ 9 heavy duty, double side-supported bottom and top rollers to achieve high capacity with an exact cut accuracy
- ▶ Fixed mechanical waste gate – for optimal and fast removal of waste and defect workpieces
- ▶ Motorised adjustment for different wood dimensions
- ▶ Designed to meet your specific requirements which will give you the best return on investment
- ▶ High focus on the operator's safety and machine reliability





# Opti-Kap 5000 Details





## Sawn timber before cutting



## Cutting to length optimization

Saw model: Opti-Kap 1001, Opti-Kap 3001 & Opti-Kap 5001



## Crayon marking of defects & quality optimization

Saw model: Opti-Kap 1002, Opti-Kap 3002 & Opti-Kap 5002



## Automatic scanning of defects & quality optimization

Saw model: Opti-Kap 1003, Opti-Kap 3003 & Opti-Kap 5003



### Identification description:

- A = A quality
- B = B quality
- C = C quality
- D = Defect
- F = Finger-joint
- R = Re-rip
- T = Trimming
- W = Waste

## Control & optimization

All Opti-Kap cross-cut series from System TM is controlled by industrial PC's, containing the System TM in-house developed control and optimizing software.

The development of the control and optimizing hard- and software is an ongoing process, using only industrial and reliable computer technologies as well as highly educated programmers. The programmers at System TM all have a vast experience in programming in the area of high-speed mechanical movements and optimization, for the best utilization of the wood.

Having in-house resources dedicated to develop and create hard- and software for the Opti-Kap series, working directly together with the System TM mechanical and electrical engineering team, is the main reason why the Opti-Kap series are the fastest and most reliable optimizing cross-cut saws worldwide today.

## Opti-Kap computers

- ▶ Industrial multi touch screen including simple user interface and software
- ▶ Optimizing on both wood resources and the overall line utilization, guaranteeing the best optimization of staff and wood resources
- ▶ Complete hard- and software integration between all functions of the line
- ▶ Automatic line control from one computer
- ▶ Web-based PC with external log-on option
- ▶ Extensive range of production statistics available
- ▶ Access availability from local network
- ▶ Simulation production software including the transfer of pre-prepared setup and production data

## Optimizing methods

- ▶ Minimum waste
- ▶ Value optimization
- ▶ Parallel ending of cutting lists
- ▶ Width optimization
- ▶ Length x number



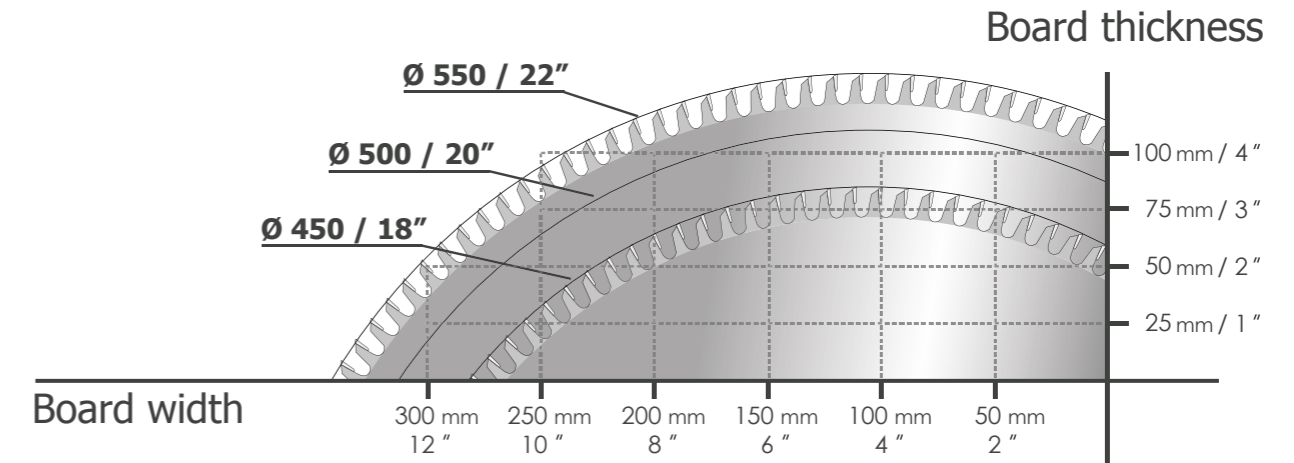
# Technical Data

## Overview of the data for Opti-Kap cross-cut saws

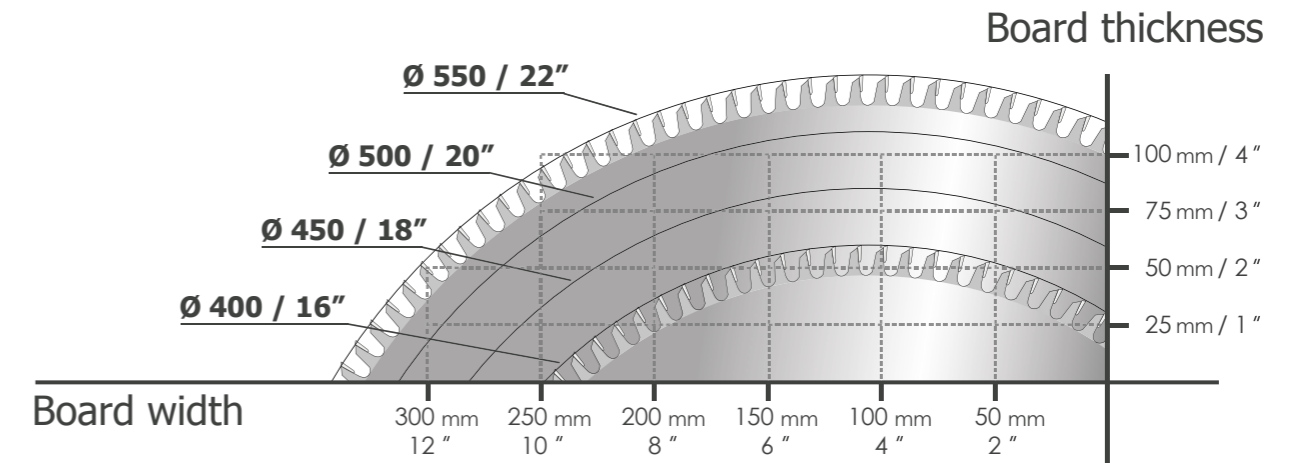
	Opti-Kap 1000	Opti-Kap 3000	Opti-Kap 5000
Board length	300 - 6,300 mm (1' - 20')	500 - 6,300 mm (3' - 20')	500 - 6,300 mm (3' - 21')
Board width	20 - 300 mm (0.8" - 12")	30 - 300 mm (1.2" - 12")	30 - 203 mm (1.2" - 8")
Board thickness	10 - 100 mm (0.4" - 4")	12 - 100 mm (0.5" - 4")	12 - 75 mm (0.5" - 3")
Cross-cut length	25 - 6,300 mm (1" - 20")	115 - 6,300 mm (4" - 20')	100 - 6,300 mm (4" - 20')
Min. cross-cut length at board end	25 mm (1")	180 mm (7")	115 mm (4.5")
Cross-cut tolerance up to 1,000 mm / 39.37"	+/- 0.1 mm (pusher tol.) (0.004")	+/- 1.0 mm (+/- 0.039")	+/- 0.75 mm (+/- 0.03")
Cross-cut tolerance longer than 1,000 mm / 39.37"	+/- 0.1mm (pusher tol.) (0.004")	(1 ‰ of cutting length)	(0,75 ‰ of cutting length)
Saw blade stroke	Pneumatic driven system	Servo driven cam system	Servo driven exentric system
Feed motion	Servo	Servo	Servo
Air consumption	300 L/min. 6 Bar (79 gal/min. 87 psi.)	500 L/min. 8 Bar (132 gal/min. 116 psi.)	500 L/min. 8 Bar (132 gal/min. 116 psi.)
Waste extraction	1,500 m/hour (53,000 ft <sup>3</sup> /hour)	3,000 m/hour (106,000 ft <sup>3</sup> /hour)	3,300 m/hour (116,000 ft <sup>3</sup> /hour)

All of the above data can be customized upon request

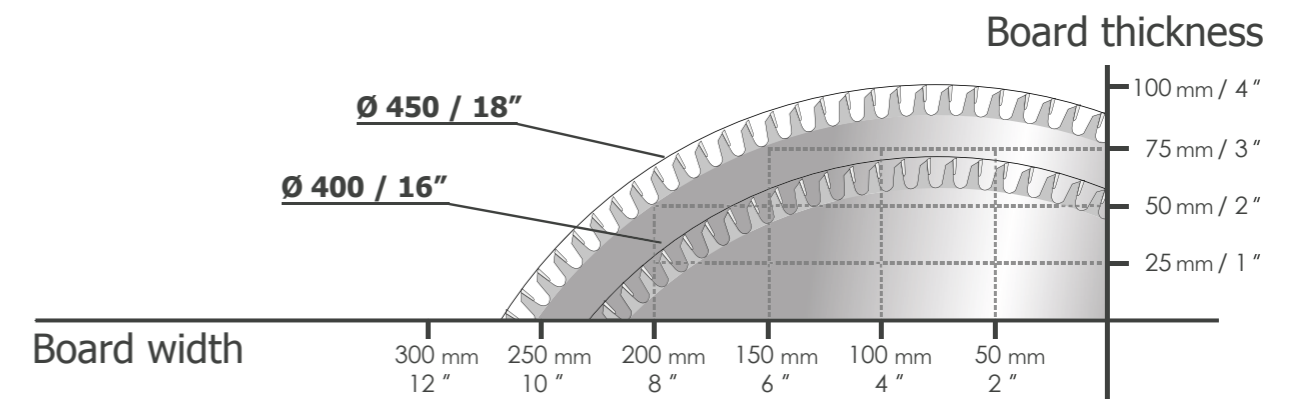
## Opti-Kap 1000



## Opti-Kap 3000



## Opti-Kap 5000





# Additional products

## 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 and fully customized system solutions.



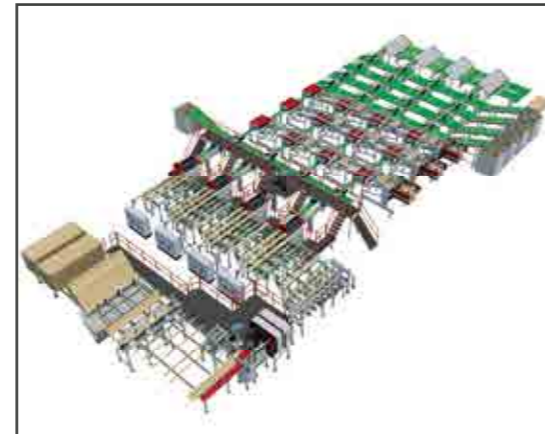
**Opti-Feed**  
Automated feeding systems



**Opti-Stack**  
Automated stacking systems



**Opti-Joint**  
Automated finger jointing systems



**Opti-Solution**  
Customized system solutions



All products and system solutions from System TM can be equipped with an automatic scanning system for best lumber utilization and production optimization.

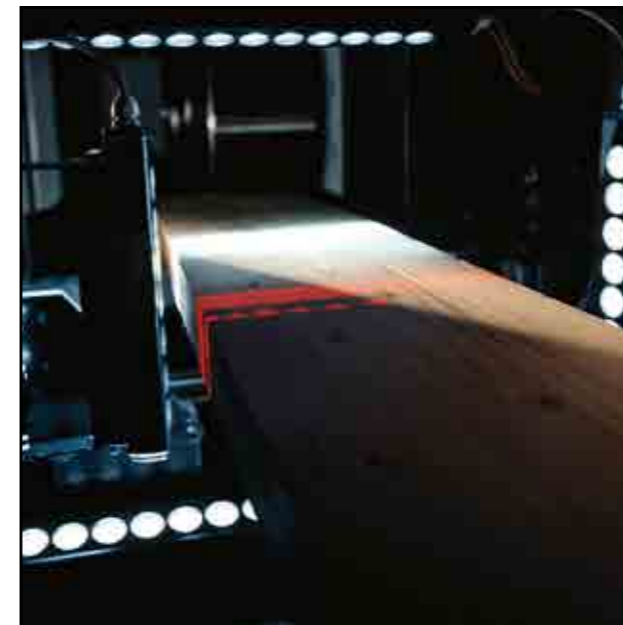
The scanner partner of System TM is a technology leader within the scanning industry. Their scanners are very reliable and accurate when recognizing wood defects in order to automate, streamline and optimize your production.

The identification of the characteristics of the lumber, is based on a Multi-Sensor scanning technology that recognizes knots, cracks, pitch pockets, holes, stains, waness and other board defects as well as their location. With unheard precision, and at a very high speed, the sensors scan the boards for the best possible lumber utilization.

A product or system solution from System TM, combined with today's scanning technology and optimizing software, ensure the best production optimization, at an unbeatable high capacity.



► *The Microtec Multi-Sensor Scanner Goldeneye*



► *The multi sensor scanning technology scan the workpieces for best wood utilization.*



# 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 offers 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 unexpected events.

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 provide 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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**Optimization of staff and wood resources**