

Edger Optimizer Technology

Combimes Line



Universal edger optimizer and resaw system for
boards, flitches and cants

EWD
The SawLine Company™

Universal edger optimizer and resaw system for boards, flitches and cants



Clear and operator-friendly manipulation area



Operator control panel



Sorting and turning device



Flexible bottom and top arbor edger/gang saws

The comprehensive EWD edger optimizer system program scores with the world-wide widest range of applications and meets the requirements of the modern sawmill industry in every aspect.

The edger optimizer system Combimes^{Line} stands for steady performance and high added value in the performance class of up to 25 boards per minute. It is designed and build very robust and provides reliable excellent production and recovery figures, even under the toughest conditions.

The patented scanning and positioning process of the lumber as well as the broad range of applications made possible by the range of available edger/gang saw units speaks for the use of the edger optimizer system Combimes^{Line}.

Edger optimizer system with wide application range Functions and technical components

The concept

The scanning takes place on the integrated cross conveyor, which afterwards positions and skews the boards on the edger infeed chain.

The scanning

The optical non-contact scanning process is designed to handle both flat and steep wane. The 4-edge point scanning system can scan lumber up to 120 mm respectively 225 mm thickness.

The electronics

The scan data are processed by an industrial PC, together with a possible quality or lumber species assignment. Depending on the selected edging program, length, thickness and width of the lumber, the desired product is sawn. The wane allowance can be entered as per cent or absolute value, separate for the left and right side. Three buttons for bark or sap wood deduction and 10 hot-keys for fixed board dimensions are free-programmable.

The board positioning

Patented scanning and skewing of the boards with precise positioning on the edger infeed chain with one conveyor / positioning system. This principle absolutely avoids any mechanically caused misplacement. Board positioning and skewing program options:

- Full taper left or right side
- Split taper or center line edging
- Center line positioning according to the optimum board axis

The mechanical design

The cross conveyor is fitted with duplex chains for good board to dog contact. The automatic cross conveyor speed control with frequency inverter provides a smooth transport of the boards. The feed speed of the edger infeed chain is controlled with frequency converter, with automatic control according to lumber thickness and number of saws in the cut. All lift / lower and pivot-functions of the infeed table are done by hydraulic cylinders.



S-shaped unscrambler conveyor



Board transfer



Pivoting length stops



Cross-cut and end-slab trim saw



O-Line cross-cut saw



4-points laser scanning system

Combination edger/gang circular saw BNK

For sawing heights from 17 - 225 mm



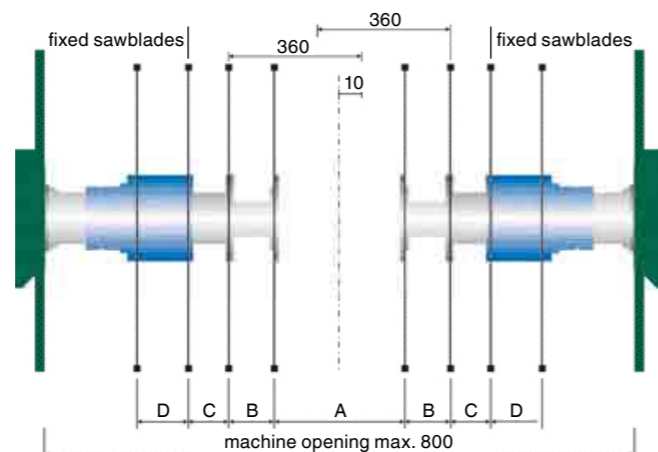
BNK 6, Outfeed side

The edger/gang BNK is fitted with two top-mounted, moveable saw arbors. They hold each one saw box saw, one telescopic moving saw and one saw sleeve of 115 mm useable length.

The saw arbors are adjustable in height to adapt the machine to different modes of operation. They can be lifted to even clear the lumber. The width adjustment is done by servo-hydraulic networks.

The machine design provides full clearance to the bottom for the discharge of sawdust, with most of the machine components installed outside the edger side walls.

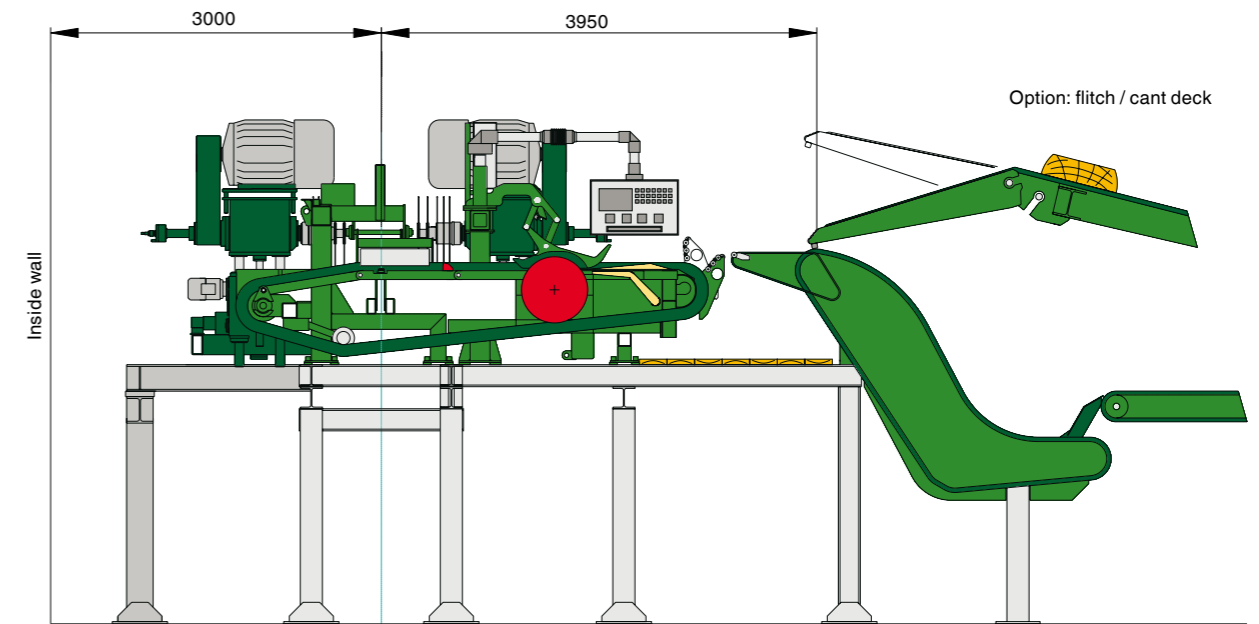
Saw set distances of the edger/gang circular saw BNK 6



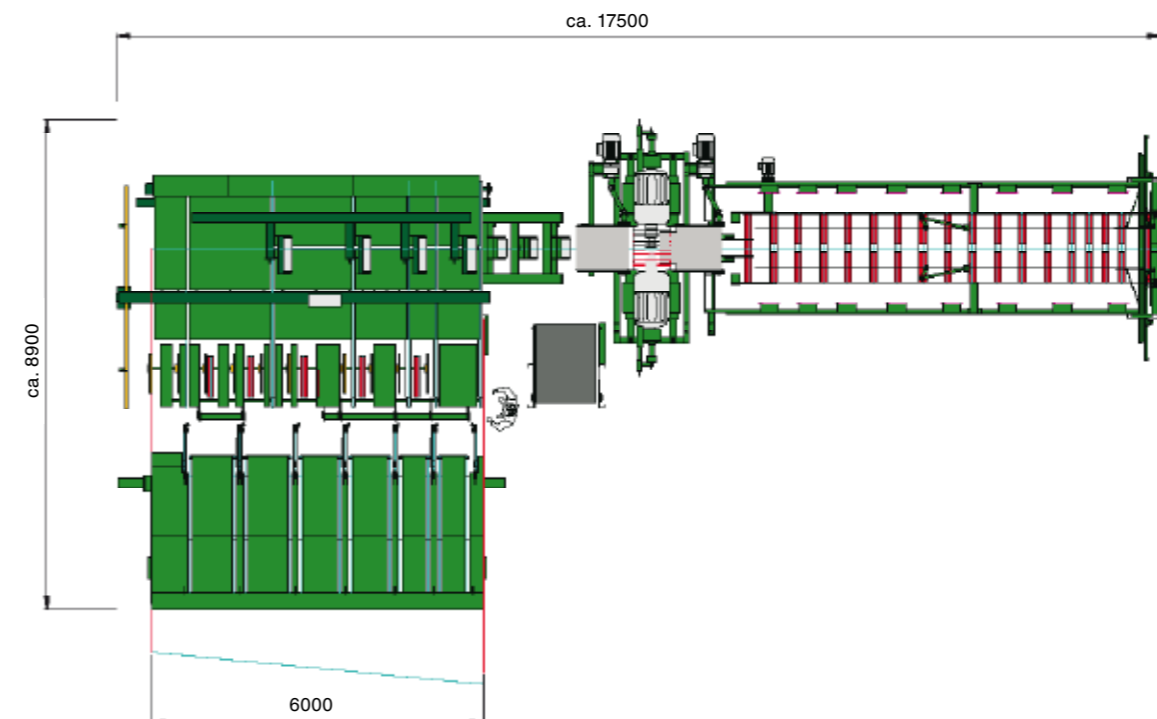
A: 18 - 655 mm B: 18 - 205 mm C: 18 - 143 mm D: 115 mm

Machine layout Combimes Line - BNK

With top-mounted transverse scanning, feeding from the left side



Cross section view seen in feed direction



Top view manipulation area, scanning, infeed table, combination edger/gang BNK and edgings/slabs separator

Combination edger/gang circular saw BKO

For sawing heights from 17 - 120 mm



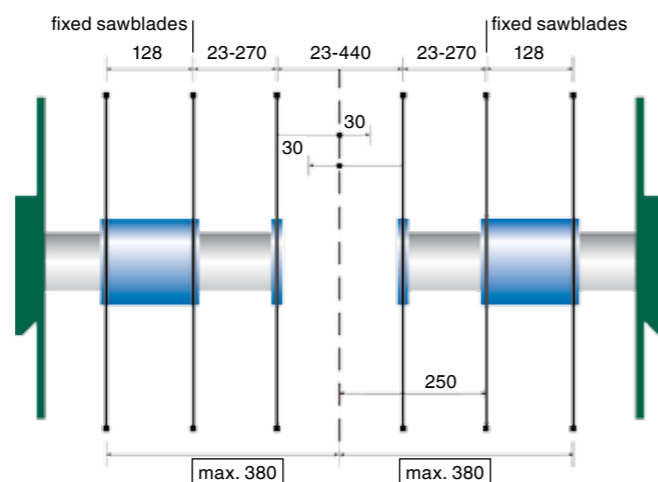
BKO 3, Outfeed side

The edger BKO is a top arbor machine with 2 moveable stub saw arbors, each holding one saw blade. Additionally 1 or 2 moveable saw sleeves can be installed and moved on the saw arbors (BKO 3, BKO 4). With one rip saw head per side and movement via telescopic saw arbor, in total 6 moveable saw heads are possible (BKO 6). The saws are set with servo-hydraulic networks.

The top arbor design provides optimum sawing conditions for highest feed speeds.

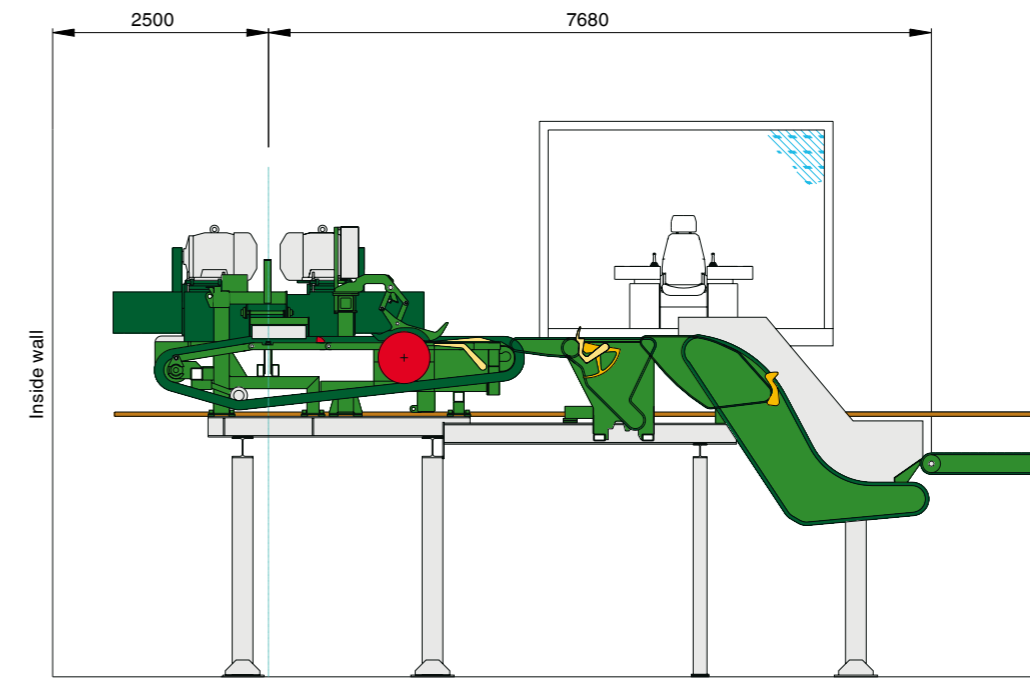
The machine design provides full clearance to the bottom for the discharge of sawdust, with most of the machine components installed outside the edger side walls.

Saw set distances of the Combination edger/gang circular saw BKO 4

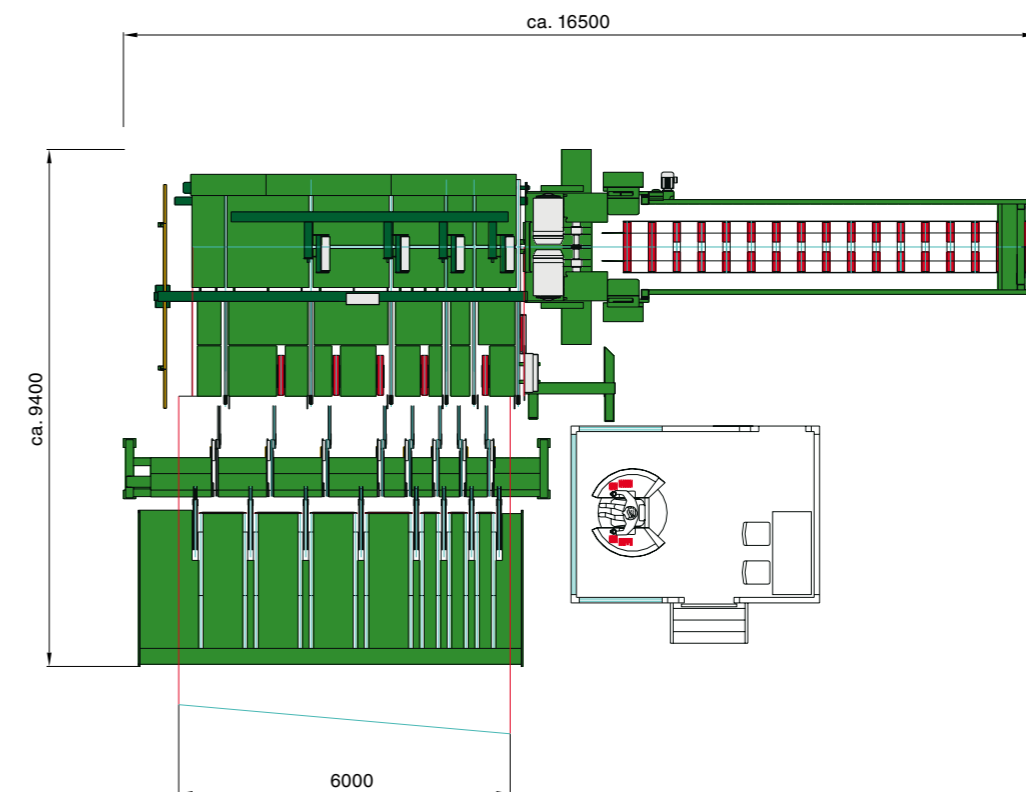


Machine layout Combimes Line - BKO

With top-mounted transverse scanning and operator cabin



Cross section view seen in feed direction



Top view manipulation area, scanning, infeed table, combination edger/gang BKO and edgings/slabs separator

Combination edger/gang circular saw DK 90

For sawing heights from 17 - 120 mm

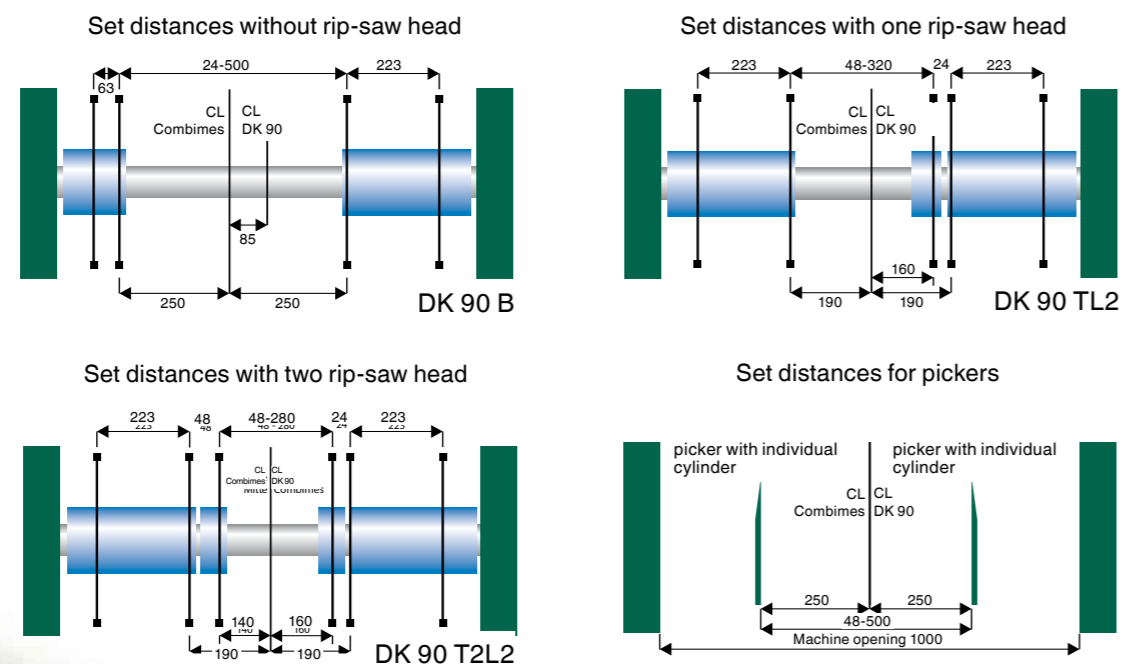


DK 90, Outfeed side with hydraulically moveable picker plates

The DK 90 with bottom saw arbor can be fitted with up to 4 moveable saw heads. All moveable saw heads are set by hydraulic networks. The DK 90 is a time proven edger for many years now and stands for high and absolute reliability even under the toughest conditions.

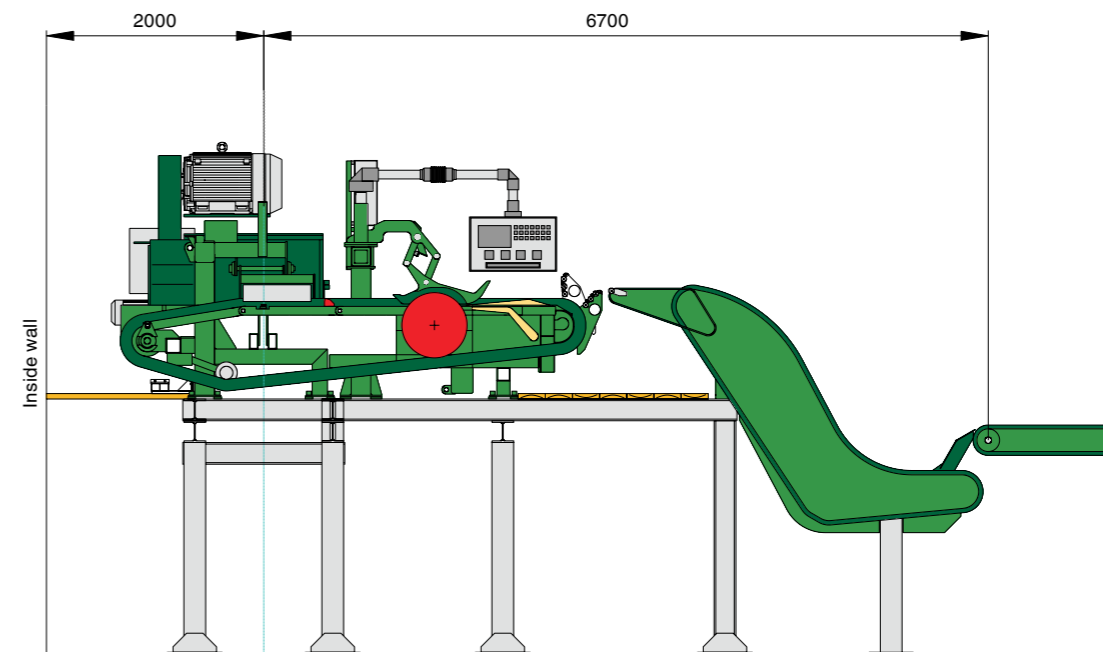
The machine design provides clearance to the bottom for the discharge of sawdust.

Saw set distances of the edger/gang circular saw DK 90

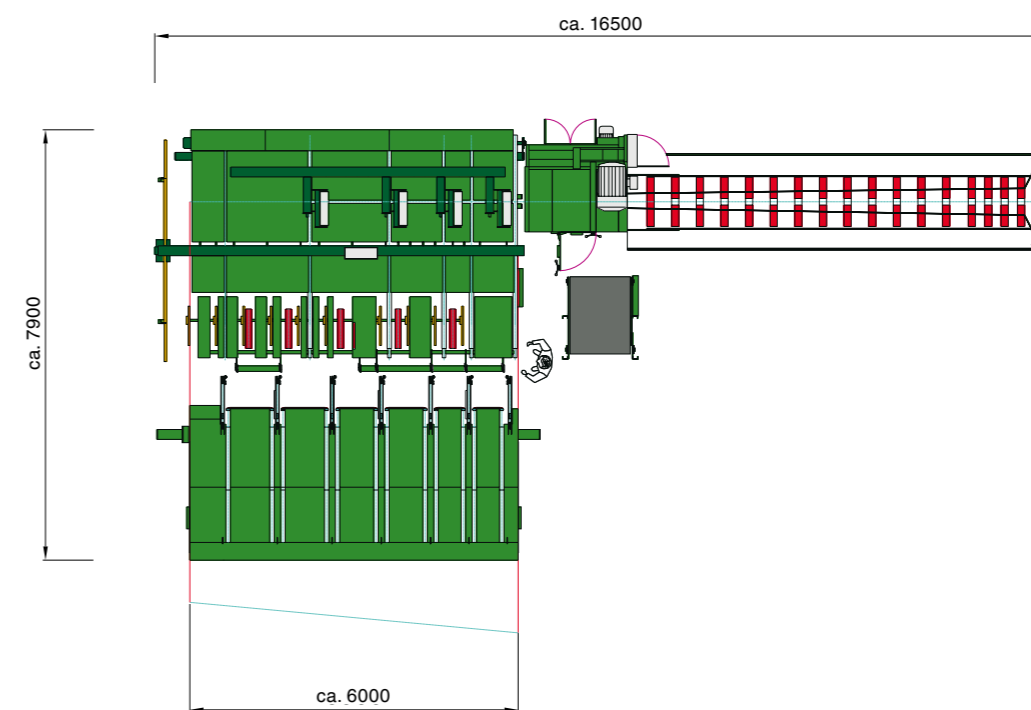


Machine layout Combimes Line - DK 90

With top-mounted transverse scanning, feeding from the left side



Cross section view seen in feed direction



Top view manipulation area, scanning, infeed table, combination edger/gang DK 90 and edgings/slabs separator

Scanning-System

Combination of reflective photo eye and laser scanning

The boards and flitches or cants respectively are scanned at three positions.

The reflective photo eyes

Reflective photo eyes installed in the infeed table determine the rough board length. Based on these values, the required active chain runs are selected.

The thickness measuring

A rotary pulse counter installed at a top shoe measures the lumber thickness. This value is used to automatically set the cross conveyor speed and pre-position the top press rollers of the infeed table.

The scanning system

The contour and length of the lumber is measured by a precise laser-triangulation scanning system. This optical, non-contact process measures exactly the lumber cross section at each scan point with the 4-point scanning principle. The number of laser scan heads can be freely chosen from 13 laser sensors for 6 m lumber length in the standard configuration up to 25 laser sensors from the top. The optionally available bottom scanning systems makes the turning of the boards unnecessary. The industrial standard PC processes the data of the laser scanning system and calculates the open face of the lumber. The optimization software determines from the stored product data and edging programs the optimum edging/ripping solution.



Technical data and optional features

Edger and combination gang BNK, BKO, DK 90

Options available with CombimesLine - modular design

- Integrated even end rollers with lift/lower function to bring heavy boards or cants to the 0-line or even-end trimmed board sections
- End slab cross cut saw with slab drop-out integrated at the operator position
- Board trim saw at (2.0 m /) 3.0 m length to cut one board in two pieces
- Automatic board turning device with hydraulic cushioned lowering arms
- Pivoting length stops can be lowered hydraulically when handling boards
- Slab supporting conveyor, self driven
- Optional board flush line at the far end side of the system
- PC controlled operator interface for programming of edging-and sorting programs
- PC based, free programmable production and sorting reports
- Modular system, can be upgraded to handle up to 8 m lumber length

Edging system	Combimes-	BNK	BKO	DK 90
Piece count max.	pcs/min	22	25	18
Board length	m	1,2 - 6,0	1,2 - 6,0	1,0 - 6,0
Board width unedged	mm	80 - 700	80 - 700	80 - 700
Board thickness	mm	17 - 225	17 - 120	17 - 160
Feed speed	m/min	20 - 180	20 - 210	20 - 160
Main drive motor size	kW	2 x 75 - 132	2 x 37 - 132	1 x 37 - 160

Due to constant product improvements or developments the illustrations and specifications contained in this brochure are subject to change without notice.

Custom-made solutions
Custom-made solutions
Custom-made solutions

Bandsaw Technology

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