

■ LOG BANDSAWTECHNOLOGY

EBB
EW2



LOG BANDSAW TECHNOLOGY

faster – more gentle - easier

more flexibility
more value yield
less operators

No other sawing process offers the flexibility and individual possibilities to convert round logs into many different products as the Log Bandsaw Technology does.

Traditionally the log bandsaw was used for large diameter logs and especially for hardwood logs.

Today, the EWD Log Bandsaw Technology is economically feasible for universal sawing applications because of our high degree of automation, very dynamic electric drive systems, very precise servo-setworks, most modern scanning and optimization processes, process reporting and visualization.

The technology leap in modern bandsaw tool preparation as well as the now common service offered by professional saw grinding companies allows calculating the tooling costs very easily.

LOG BANDSAW TECHNOLOGY

slanted 17°

The 17° slanted bandsaw headrig and carriage gain more and more acceptance.

The advantages of the slanted design are enormous:

- The loading of the logs onto the carriage is significantly faster due to the easy transfer.
- The sawn face of the log can be well seen.
- The transfer of the sawn lumber onto the discharge conveyor happens fast, gentle and in a safe way.
- Due to the slanted set-up, the lumber lands on the transfer conveyor with the narrow face up.
- As a result the further processing of the lumber is easier.
- The high degree of automation and a modern control stand allow one operator to monitor besides the bandsaw headrig operation the automatic performance of edger-optimizer, flitch cross cut saws and a circular resaw as well.

EWD



The modern EWD Log Bandsaw Technology makes the 1 operator only sawmill become reality.

■ LOG CARRIAGE EW2

Powerful and flexible



The headblocks

The headblocks are made in extra heavy, shock-resistant welded steel construction and are moved on precision machined block supports. All lumber supports are hard-chrome plated and exchangeable. All headblocks have independent positioning by means of servo-hydraulic networks with very high setting speeds and can therefore adjust to every log shape. The clamping is done hydraulically. The applied pressure can be adjusted stepless by remote control from the operator panel to suit the sawing requirements. The dogs can be adjusted independently from the headblocks. This function allows adjusting the dog standout position stepless and to pull the lumber against the vertical supports to ensure dimensional accuracy of even the last board sawn.

The log turners

Log turners are on board mounted v-type double arm turners allowing a fast turning in both directions. The spacing of the log turners can be customized to individual requirements.

The carriage frame and running gear

The high precision of the carriage running gear and track contributes significantly to the accuracy of the sawn lumber. The wheels are made of tempered, wear resisting special steel and are generously sized with a diameter of 300 mm and wide wheel faces. The headblocks form a unit with an own axle and a pair of wheels, avoiding any flexing of the carriage frame. This design allows the spacing of the headblocks to be customized to suit the individual requirements.

■ LOG CARRIAGE EW2



The carriage drive

A highly dynamic electric drive system with a frequency converter controlled gear motor powers the carriage. The drive package is available in 3 power sizes. The drive system is fitted with a strongly dimensioned steel rope (diameter 24 mm) and a direct driven winch drum. An energetic recovery system is optionally available.

The hydraulic system

All movements for log/lumber manipulation on the carriage are hydraulic powered and the required supply is provided by a stationary hydraulic power unit via flex chain. This reduces the carriage masses required to be moved, saving energy and increasing the dynamics.

The power supply system

Hydraulic, electric power and bus control cables are connected to the carriage via a top-mounted low wear Flex Power Chain.

The central oil lubrication

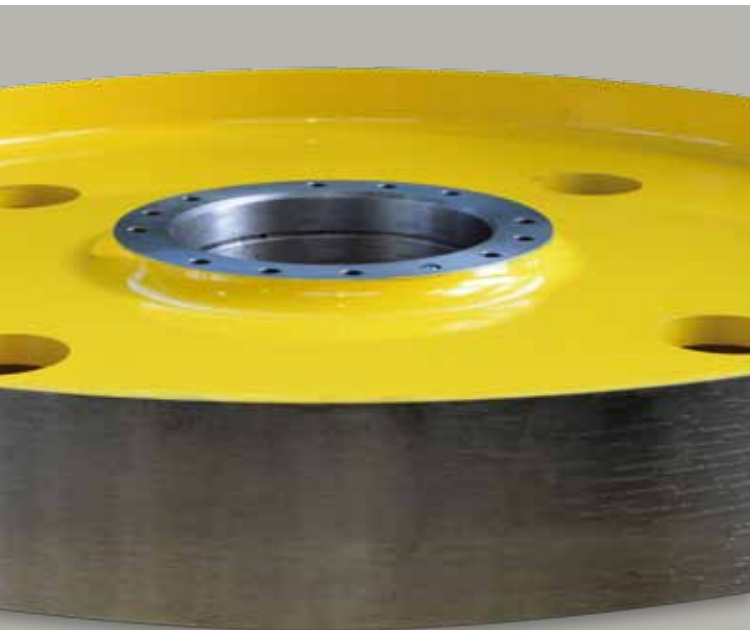
The automatic central oil lubrication supplies all slide movements of carriage and rails and thus reduces the required maintenance drastically.

Options

- Circular rip saw for horizontal split cuts or vertical cross cuts
- Blocking of dogs when doing horizontal split cuts
- Log lifter to adjust log center to the horizontal cut line



LOG BANDMILLS MODUL EBB 1600, 1800



Bandmill wheel



Saw strain system

The bandmill wheels

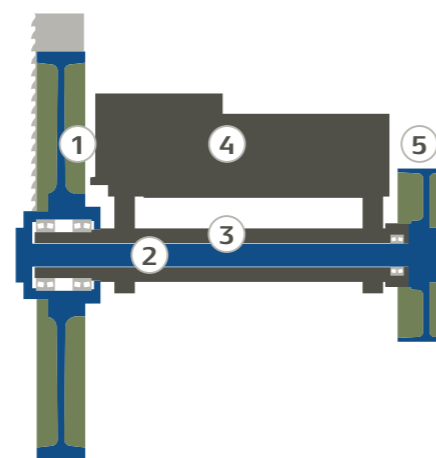
Due to the high stresses, both wheels are made from high quality spheroid graphite iron. The surface hardness of this material allows years of operation without needs to regrind the wheels. The design of the wheels has been optimized by FiniteElements computer calculations. The bottom wheel with it's considerably higher momentum always pulls the band through the cut.

The saw strain system

The sawing accuracy of a bandsaw depends heavily on the bandsaw strain system. The EWD strain system offers a very fast reaction time and instantaneous shock absorption. One short stroke, quick reaction hydraulic cylinder provides strain, which can be adjusted infinitely up to a maximum saw strain of 200 N/mm². The saw strain is then automatically kept constant, even when encountering different sawing loads, such as changing log density or knots.

The wheel bearings

The saw strain is directly transferred to the machine frame by utilizing the dead arbor concept. The drive shaft is thereby not loaded with bending stresses. Advantage: minimum bearing wear, highest precision and smooth running.



- 1 bottom wheel
- 2 drive shaft
- 3 dead arbor
- 4 machine frame
- 5 drive pulley

LOG BANDMILLS MODUL EBB



The saw blade guides

The saw guides are pressure guides, pushing the saw blade out of the vertical plum line in the cut. To avoid any collision between clamped log and the saw blade during the return move of the carriage for the next cut, the bandmill with the saw is pulled hydraulically away from the cut position, controlled by an adjustable initiator sensor. The top saw guide is height adjustable with a hydraulic cylinder. The bandmill is set on guides and can be fitted optionally with a servo-hydraulic network. Thus the maximum opening between headblock and bandsaw can be increased to 1400 mm for over-size logs.



Top saw guide

FBS FLYING BANDSAW Active saw guide system using intelligent magnets

For very demanding production and sawing accuracy requirements, we use the active saw guide system FBS with intelligent magnets.

The advantages of the Flying Bandsaw Technology

- Relieving the saw blade of stress through conventional pressure guides allows the introduction of higher saw strain and higher saw speeds.
- The exact tracking of the bandsaw blade as it passes through the lumber is achieved by the magnetic forces of the FBS Technology. This allows for substantially higher feed speeds.

The results are

- constant accurate sizes
- notably higher production and recovery

The FBS Technology achieves excellent production results in summer and winter operation.



■ eWOOD Optimization and user interface software from EWD

eWood is a comprehensive optimization and user interface software from EWD. All modern EWD sawlines and machines share the same interface application software. The interface man-machine offers an intuitive and consistent user concept, allowing effective use of the functions after just a short training period.



■ Log Bandsaw Controls/Operation



Controls and comfort of operation

- Industrial type PC, operator terminal and color monitor
- Windows operator interface with menu-driven controls
- Permanent display of all important values and parameters
- Extensive display of operation messages in plain language, with test and service functions
- Ergonomically and comfortable operator control chair
- Quick and easy operation, full operator control and override functions
- Automatic knee setting for the next cut, hot keys for fix dimensions and next cut dimension
- Automatic positioning of the carriage for log loading and automatic selection of the required headblocks and log turners
- Bus control system reduces greatly wiring work, enables a short start-up time and easy maintenance and trouble-shooting through decentralized control design with remote service

Options

- LiveView display of sawline and selected products on the real time picture of the log
- Variety of scanner systems for log and cant scanning
- Optimization of center products and side boards
- Production and shift reports
- Production to order listing and reporting
- Automatic carriage feed speed control based on sawing speed, saw performance and motor load
- 17° slanted bandmill and carriage
- Value optimization of products
- Servo-hydraulic network for the bandmill
- Laser line to display sawline on the lumber
- Water-spraying device for resinous log species
- Operator control cabin



LOG BANDSAW TECHNOLOGY

Technical data EW2, PF19, EBB

TECHNICAL DATA EW2

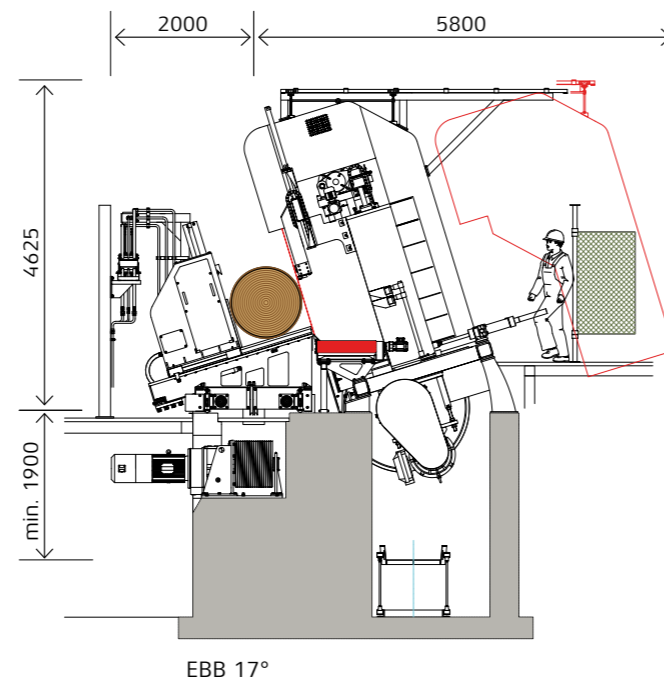
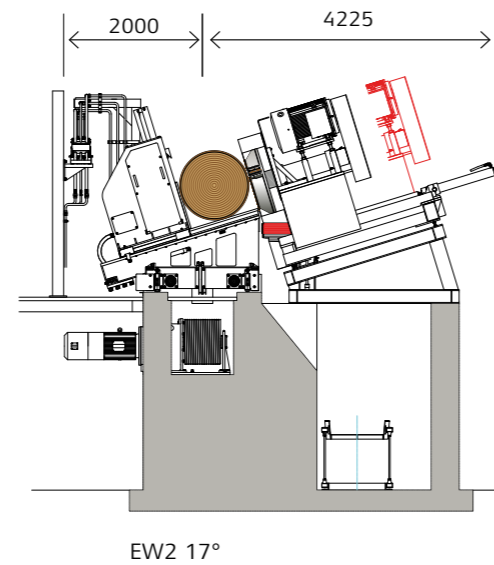
Max. log diameter	mm	1000 (1300)
Dog opening vertical	mm	935 (1055)
Track width	mm	1300
Carriage speed max.	m/min	200
Carriage acceleration	m/s ²	1,2 - 3
Carriage drive power (system)	kW	45 - 132
Weight		
(4 headblocks/3 log turners)	t	11,5
Dog projection	mm	0 - 200

TECHNICAL DATA PF19

Slabber head diameter	mm	1240
No. of main knives	pcs.	3, 4, 6
Chipping depth max.	mm	190
Chipping height above log support max.	mm	670
Set distance including park position	mm	0 - 850
Feed speed	m/min	20 - 150
Drive motor size	kW	75 - 132
Machine weight with drive motor (132 kW)	t	5

TECHNICAL DATA EBB

Wheel diameter	mm	1600, 1800
Wheel face width	mm	200 / 230
Drive motor size	kW	90 - 132
Saw strain max.	N/mm ²	200
Saw blade speed (with VFD)	m/s	30 - 70
Saw blade thickness	mm	1,65 - 1,83



LOG BANDSAW TECHNOLOGY

Productivity comparison



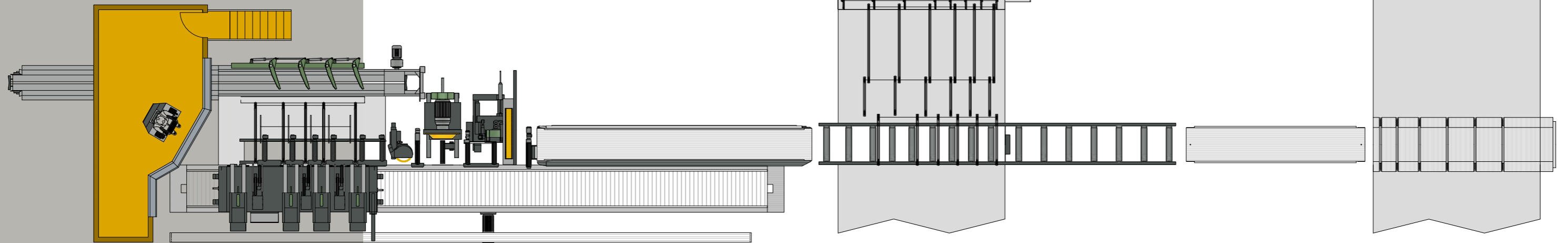
Productivity comparison of the log bandmill versions under identical conditions.

Saw pattern	D = 25 cm	D = 35 cm	D = 45 cm
Equipment	Log length 5,0 m	Log length 5,0 m	Log length 5,0 m
EBB 17° V	100% FBS + 4 %	100% FBS + 6 %	100% FBS + 8 %
PF 19 + EBB 17° V	138% FBS + 6 %	116% FBS + 8 %	118% FBS + 4 %
EBB 17° VR	136% FBS + 6 %	138% FBS + 10 %	124% FBS + 9 %
PF 19 + EBB 17° VR	138% FBS + 6 %	140% FBS + 10 %	130% FBS + 7 %

LOG BANDSAW MILL Example 1



- Log bandsaw mill 17° slanted with EW2, PF19, EBB1800 for log length up to 6 m.
- Combined with a combination edger/gang optimized system CombiTE - BNK with 6 moveable saw heads plus fix mounted saw quills for sawing heights of 18 - 225 mm.

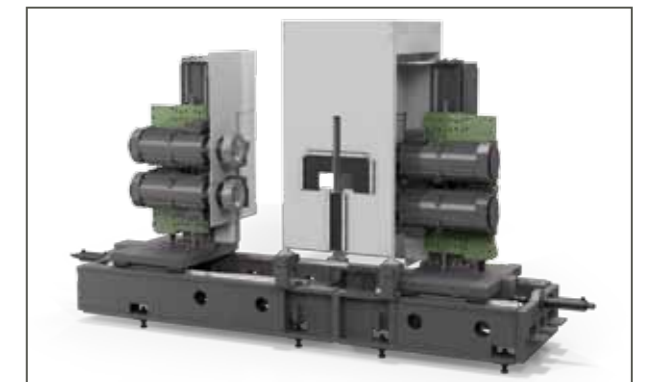
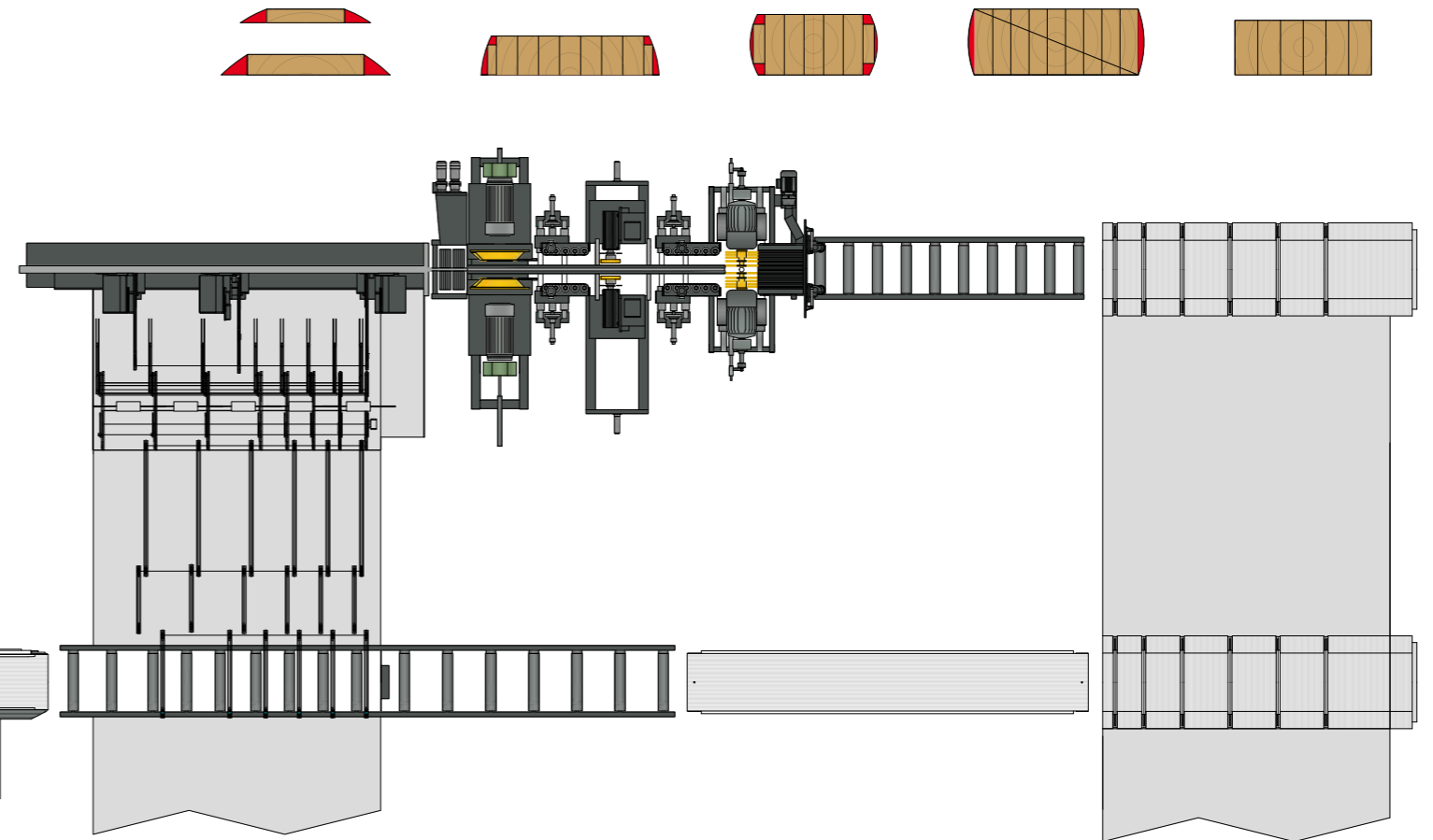
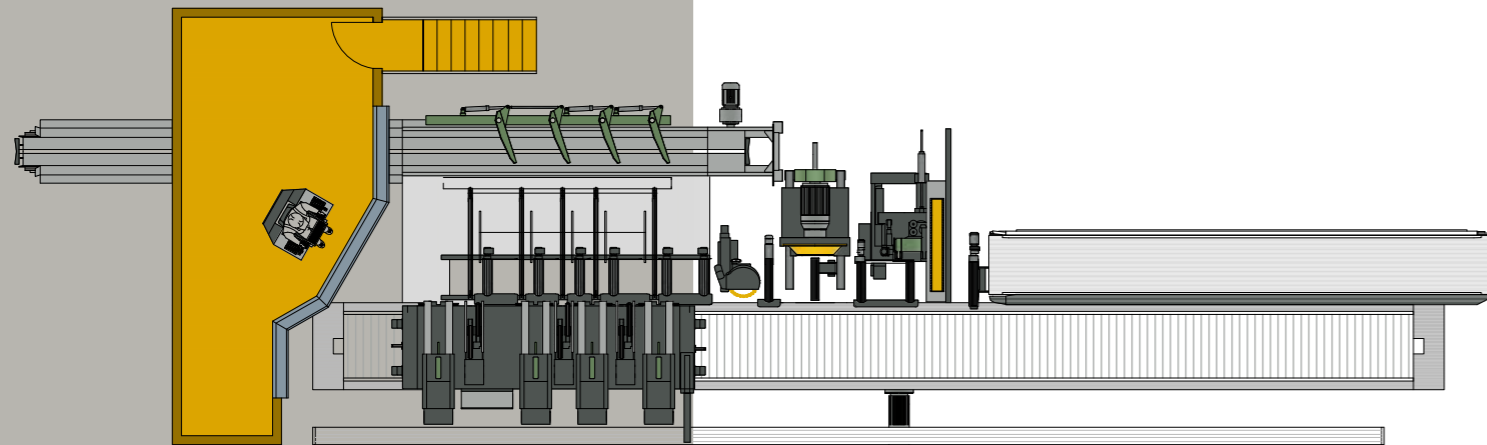


LOG BANDSAW MILL Example 2



- Log bandsaw mill 17° slanted with EW2, PF19, EBB1800 for log length up to 6 m.
- Combined with a combination reducing, profiling, edger/gang optimized system CombiTE-PF19 chipper canter, profiling unit FR15H.

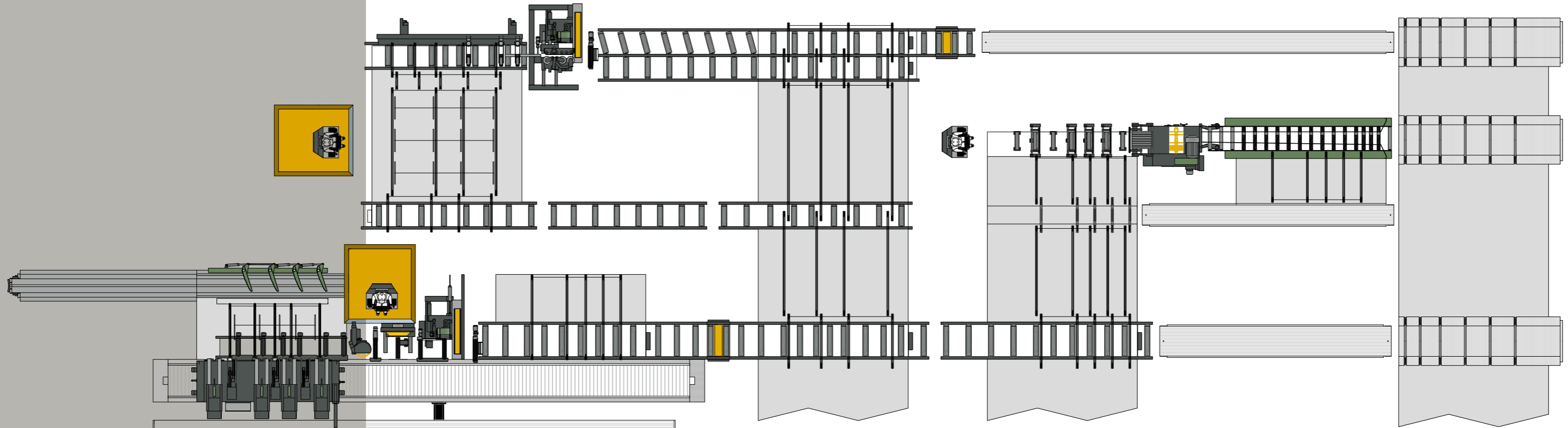
BNK with 6 moveable saw heads plus fix mounted saw quills for sawing heights of 22 to 225 mm.



LOG BANDSAW MILL Example 3



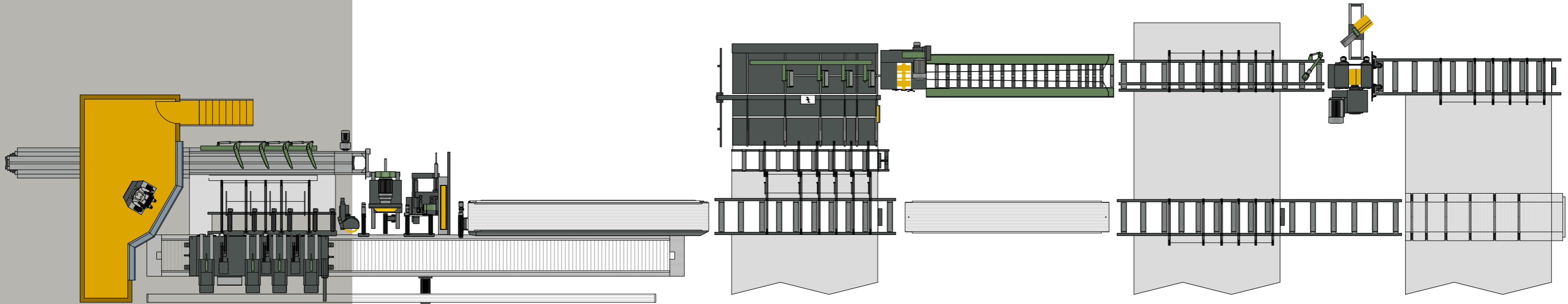
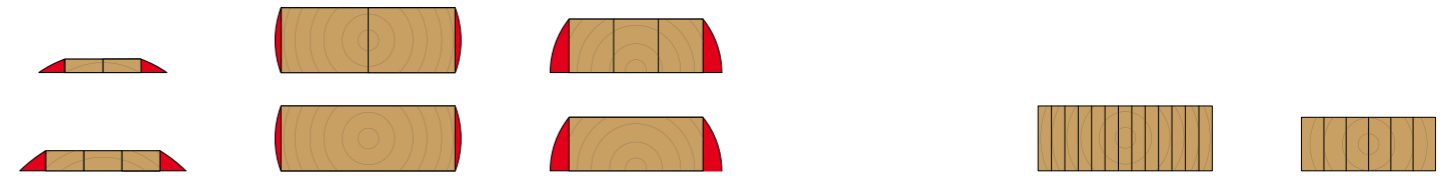
- Log bandsaw mill 17° slanted with EW2, EBB1800 for log length up to 6 m.
- Combined with a band resaw system EBT1800 and an edger/rip system DK90.



LOG BANDSAW MILL Example 4



- Log bandsaw mill 17° slanted with EW2, PF19, EBB1800 for log length up to 6 m.
- Combined with a combination edger/gang optimized system Combimes-DK90 with 4 moveable saw heads plus fix-mounted saw quills for sawing heights from 17-160 mm and a double arbor circular cant resaw NKU160 for 160 mm sawing height with fix mounted saws.





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