LOG BANDSAW TECHNOLOGY

EWD

LOG BANDSAW TECHNOLOGY

faster - more gentle - easier

→ more flexibility
→ more value yield
→ fewer 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 positioning systems, most modern scanning and optimisation processes, process reporting and visualisation.

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.

Use your phone or tablet to scan this QR Code and see the Log Bandsaw in action.

LOG BANDSAW TECHNOLOGY

slanted 17°

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

The advantages of the slanted design are:

- The loading of the logs onto the carriage is significantly faster due to the easy transfer.
- The quality of 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 waney 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.

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

LOG BANDSAW CARRIAGE EW 2

Powerful and flexible

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

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 customised to individual requirements.

THE CARRIAGE 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-resistant special steel and are generously sized with a diameter of 300mm and wide wheel faces. Each headblock forms 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 custo-mised to suit the individual requirements.

LOG BANDSAW CARRIAGE EW 2

highly dynamic and precise

THE CARRIAGE DRIVE
A highly dynamic electric drive system with a fre-quency converter-controlled gear motor powers the carriage. The drive package is available in 3 power sizes.

The drive system is fitted with a strongly dimen-sioned steel rope (24mm) and a direct driven winch drum. A refeeding system (regenerative braking)is optionally available.

THE HYDRAULIC SYSTEM
All movements for log/lumber manipulation on the carriage are hydraulically powered and the required supply is provided by a stationary power unit. 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 cable chain.

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

OPTIONS (can also be retrofitted)
- Circular rip saw for horizontal split cuts or vertical cross cuts
- Blocking of dogs when doing horizontal split cuts
- Log lifting device
- Slab turning device

LOG BANDSAW EBB-2
also as Tandem-Log Bandmill

→ with the highest precision
→ flexible for quality-oriented large log sawing
→ individual operation

Use your phone or tablet to scan this QR Code and see the Log Bandsaw in action.

THE APPLICATION AREA
The tandem log bandsaws are mainly used as break down machines, but can also in double cut action - do the final cut. Depending on the size of the company and the sawing program, a tandem log bandsaw can be supplemented by an edger optimizer system with cutting heights up to 120 mm, or by a combination resaw/edger optimizer system with cutting heights up to 225 mm, or with highly flexible single arbor with cutting heights of up to 225 mm or double-arbor circular saws with cutting heights of up to 360 mm.

THE OPERATION
The operator can always decide whether he wants to use only one saw or both saws. If the sawing mode is not determined by the individual log quality, the log can be cut in the partautomatic mode according to the program.

LOG BANDSAW EBB-2
optional with forward and backward cut

VARIANT 1
The tandem log bandsaw modules, in conjunction with a chipper canter, can chip the log in one pass and create 2 boards. The EBB-2 Tandem Log bandsaw and chipper canter cuts only on the forward pass of the log bandsaw carriage.

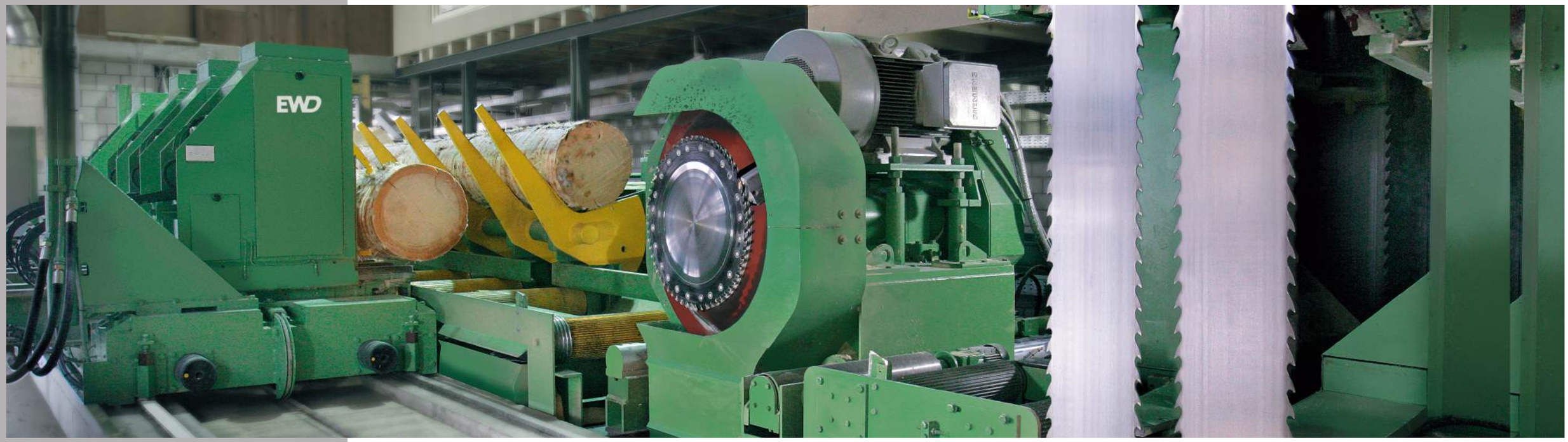
The first bandsaw headrig has a servo-hydraulic setwork for positioning. The second bandsaw headrig is hydraulically adjusted for the lifting of the saw blade from the cutting position via a mechanically adjustable initiator.

The second bandsaw headrig is fix without optional built-in servo adjustment.

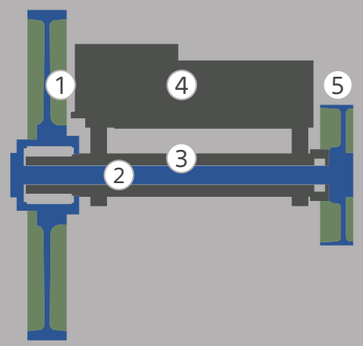
VARIANT 2
The patented version EBB R2 + PF 19 (Tandem-Log Bandsaw with double cut action and chipper canter) cuts on the forward pass of the carriage and if desired or necessary on the return pass as well.

Both bandsaw headrigs are servo-hydraulically positionable. The first saw is for the outer cut. The respective second saw is for the inner cut.

The use of the EWD Tandem Log Bandsaw with double cut action can increase the sawn volume performance, compared to a conventional single bandsaw by up to 250%.



LOG BANDSAWS MODULE EBB
1600, 1800



THE BANDSAW 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 sophisticated, computer-assisted calculation methods. The bottom wheel with its considerably higher momentum always “pulls” the blade through the log.

THE ROLLER INCLINATION
For an accurate adjustment of the bandsaw on the wheels, the inclination of the top wheel can be set by means of an electric motor.

THE SAW STRAIN SYSTEM
The sawing accuracy of a bandsaw depends heavily on the bandsaw strain system. The EWD bandsaw 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.

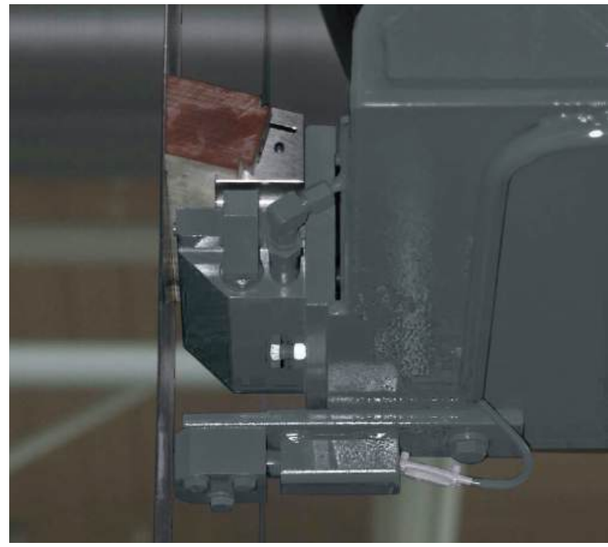
THE WHEEL BEARINGS
The saw strain is directly transferred to the machine frame by utilising the dead arbour concept. the drive shaft is thereby not loaded with bending stresses.

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 BANDSAWS MODULE EBB
FBS Flying Bandsaw

THE SAW BLADE GUIDES
The blade 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 entire bandsaw-headrig with the saw is pulled hydraulically away from the cut position, controlled by a mechanically adjustable initiator sensor. The top saw guide is moved on precision linear bearings, with a hydraulic cylinder adjusting the height. The bandsaw is set on guides and can be fitted optionally with a servo-hydraulic setwork. Thus the maximum opening between headblock and bandsaw can be increased up to 1400mm for oversize logs.



FBS FLYING BANDSAW
Active saw guide system using intelligent magnets

For very high demands on performance and sawing accuracy, we use the active saw guide system FBS with intelligent magnets. The advantages:

- Relieving the saw blade of stress through conventional pressure guides allows the introduction of higher saw strain and higher saw speeds.
- Exact guiding of the saw blade in the saw track by the magnetic forces of the FBS technology enables significantly faster feed rates.

The results are
- constant accurate sizes
- notably higher production and recovery.

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

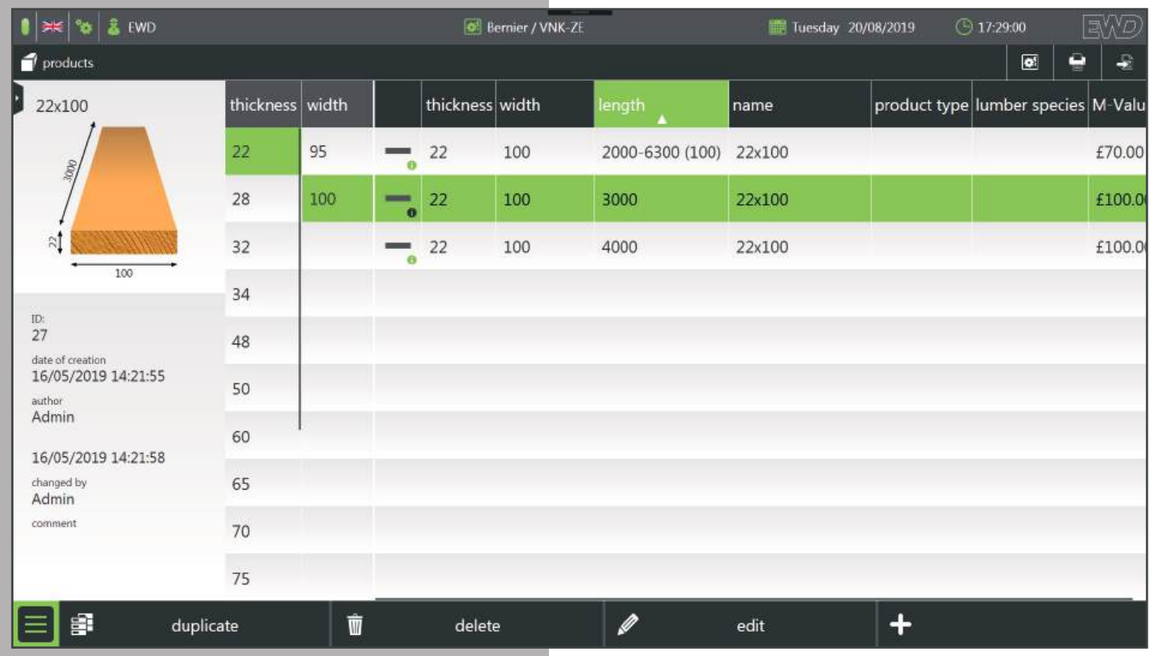
eWOOD
Optimization and application software

eWood is a comprehensive optimisation and application software from EWD. All modern EWD saw-lines and machines share the same eWood user interface.

The interface man – machine offers an intuitive and consistent user concept, allowing effective use of the

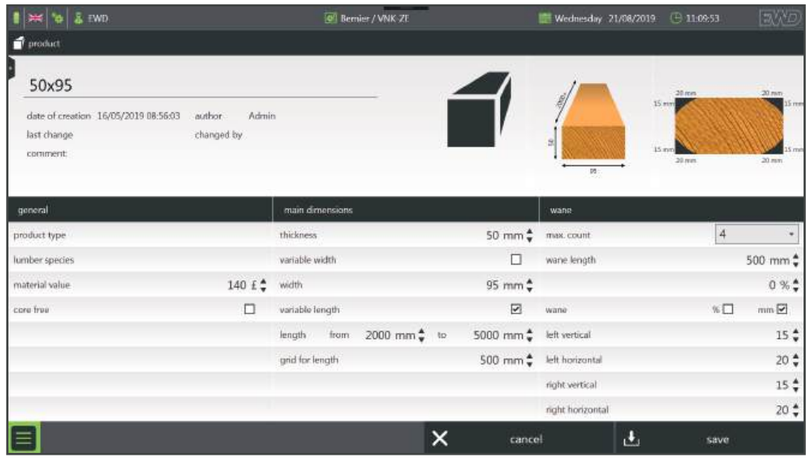
- Most modern measuring technology
- Professional optimization and application software

In addition to solid and time-proven mechanical engineering,efficient system controls are essential prerequisites for the high efficiency and yield of the EWD Log Bandsaw.

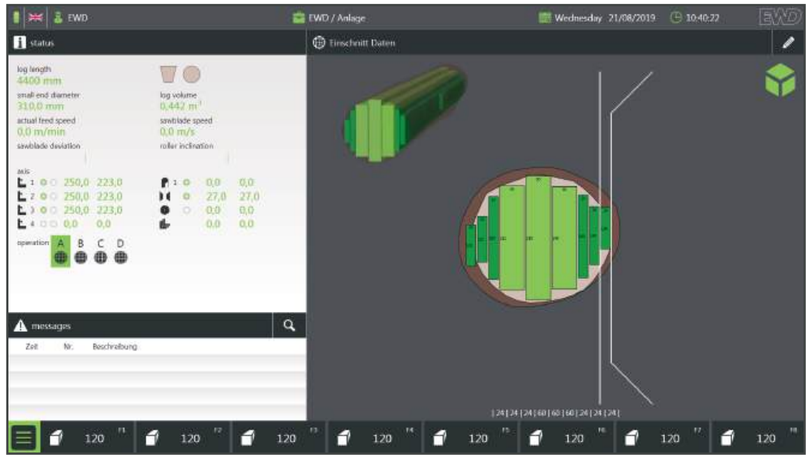


eWOOD
Examples of different settings

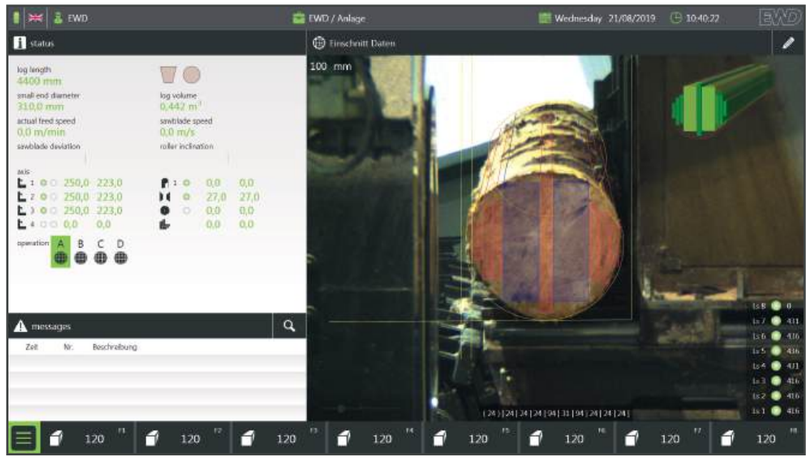
Waney face | Sideboards



Status | Sawing data graphical representation



Sawing data Live View camera



LOG BANDSAW
Controls and Operation

→ comfortable sitting posture
→ clear arrangement of the individual control panels
→ flexible adjustment options
→ stress-free handling

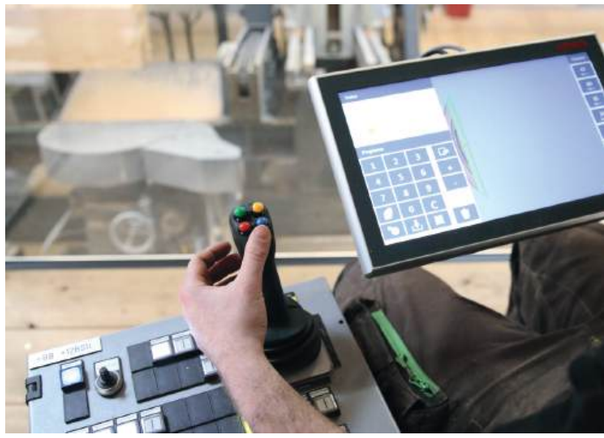
COMFORT OF CONTROL AND OPERATION

- Industrial type PC, operator terminal and colour monitor
- Windows user 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
- Fully automatic setting of the sawing thickness, 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 through decentralised control design

LOG BANDSAW
Operator control chair

OPTIONS

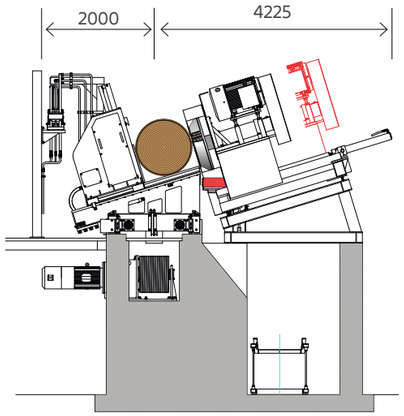
- LiveView display of sawline and selected pro ducts on the real time picture of the log
- Variety of scanner systems for log scanning
- Optimization of center products and side boards
- Production and shift reports
- Production according to order lists
- 17° slanted headrigs and carriages
- Indication of the value of the products to be sawn in %
- Servo-hydraulic setwork for the bandsaw
- Laser line to display sawline on the lumber
- Water-spraying device
- Operator control cabin
- Saw blade control
- Surveillance of the position of the top blade guide
- Double cut action
- Tooth sensor for position control of the band-saw blade on the bandsaw wheel
- Setting of the position of the bandsaw blade on the bandsaw wheel by the operator panel



LOG BANDSAW TECHNOLOGY
Technical data EBB, EW 2, PF 19

TECHNICAL DATA EW 2

Log diameter max.	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



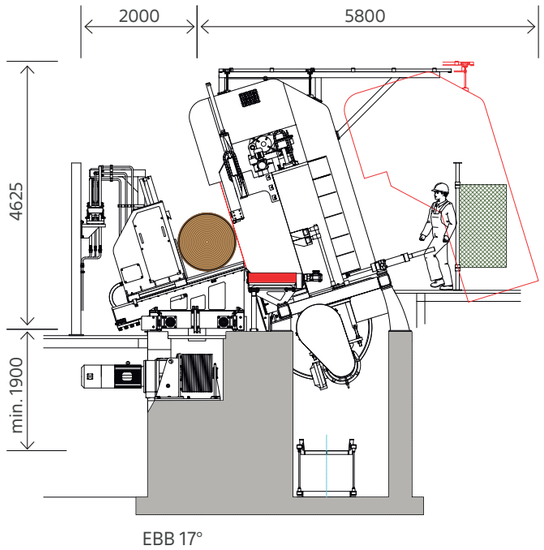
EW 2 17°

TECHNICAL DATA PF 19

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 (132kW)	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	m/s	30–70
Saw blade thickness	mm	1.65–1.83



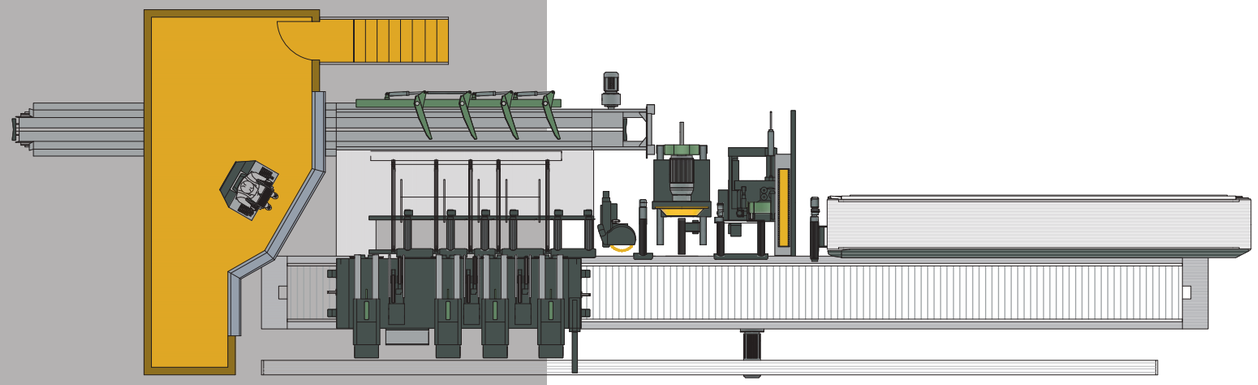
EBB 17°

LOG BANDSAW TECHNOLOGY
Productivity comparison

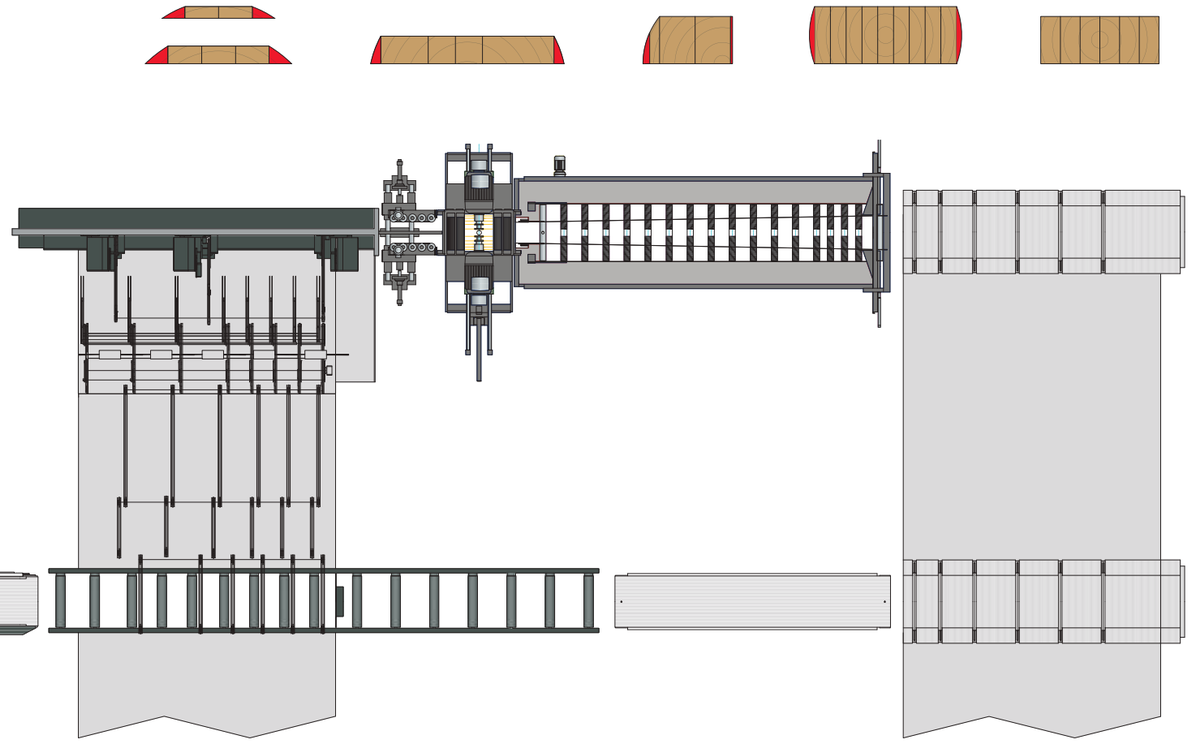
Productivity comparison of the log bandsaw versions under identical conditions.

Saw pattern / Equipment	D = 25cm Log length 5.0m	D = 35cm Log length 5.0m	D = 45cm Log length 5.0m
EBB 17° V	100% FBS + 4%	100% FBS + 6%	100% FBS + 8%
PF 19 + EBB 17° V	113% 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 BAND SAWMILL
EXAMPLE 1

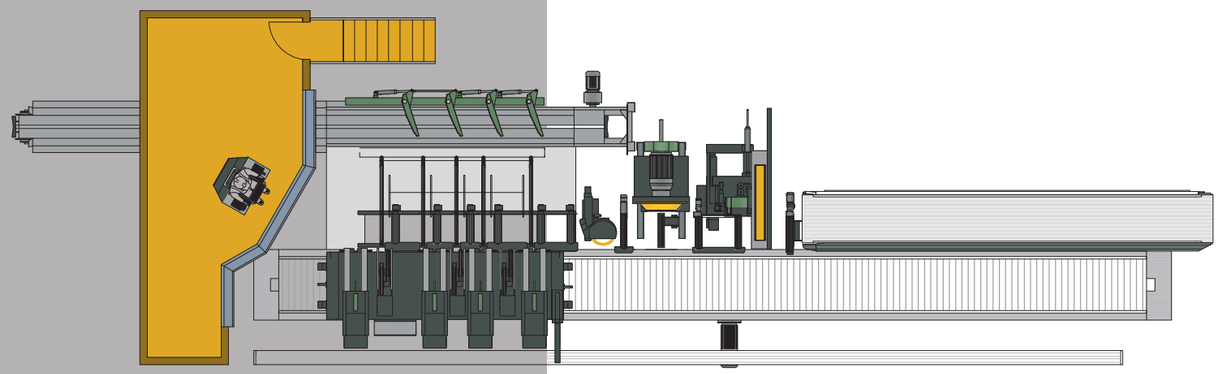


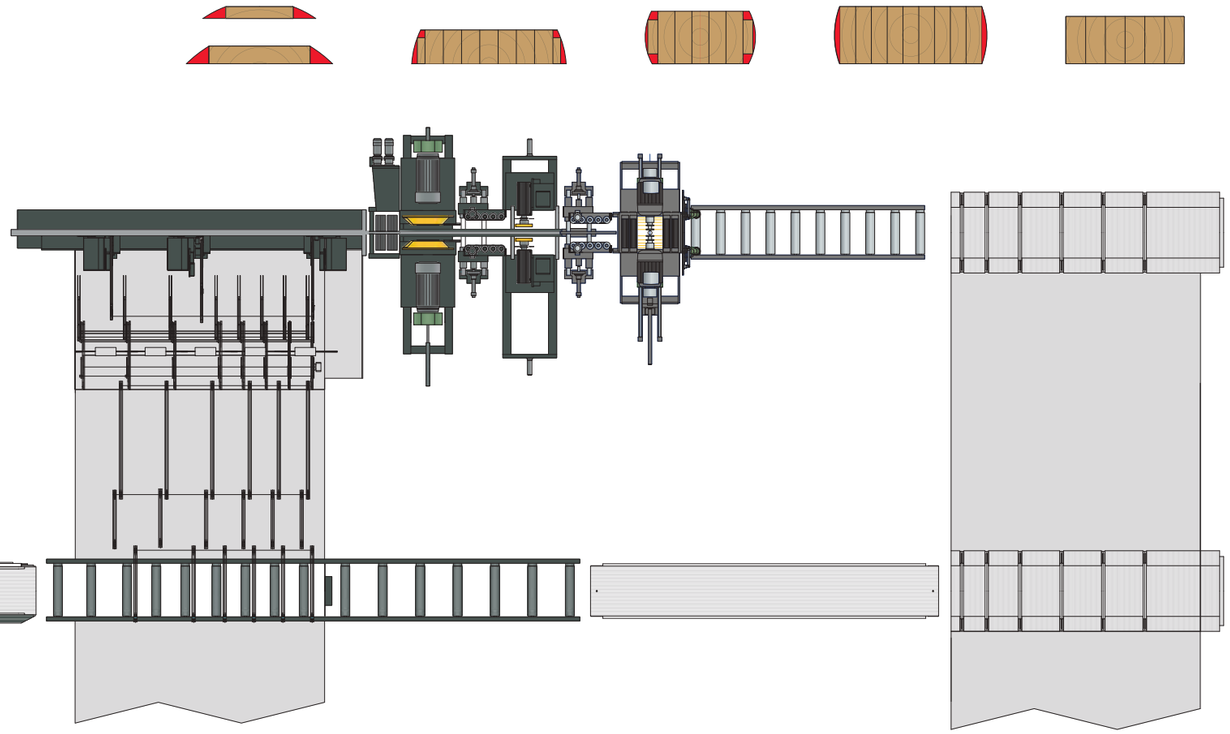
- Log bandsaw mill 17° slanted with EW2, PF 19, EBB 1800 for log length up to 6 m.
- Combined with edger and resaw system CombiTE - BNK with 6 moveable saw heads plus fix mounted saw quills, for sawing heights from 18–225 mm.

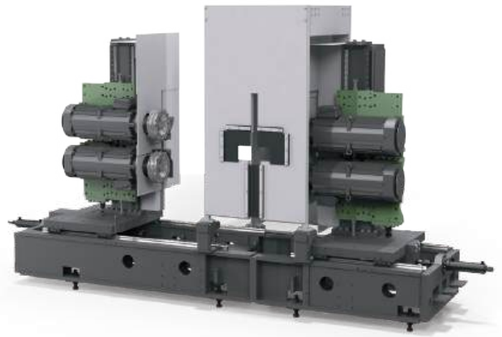


LOG BAND SAWMILL
EXAMPLE 2

- Log bandsaw mill 17° slanted with EW2, PF 19, EBB 1800 for log length up to 6 m.
- Combined with profiling, edger and resaw system CombiTE with chipper canter PF 19,
- Profiling unit FR 15 H,
- BNK with 6 moveable saw heads plus fix mounted saw quills, for cutting heights from 22–225 mm.

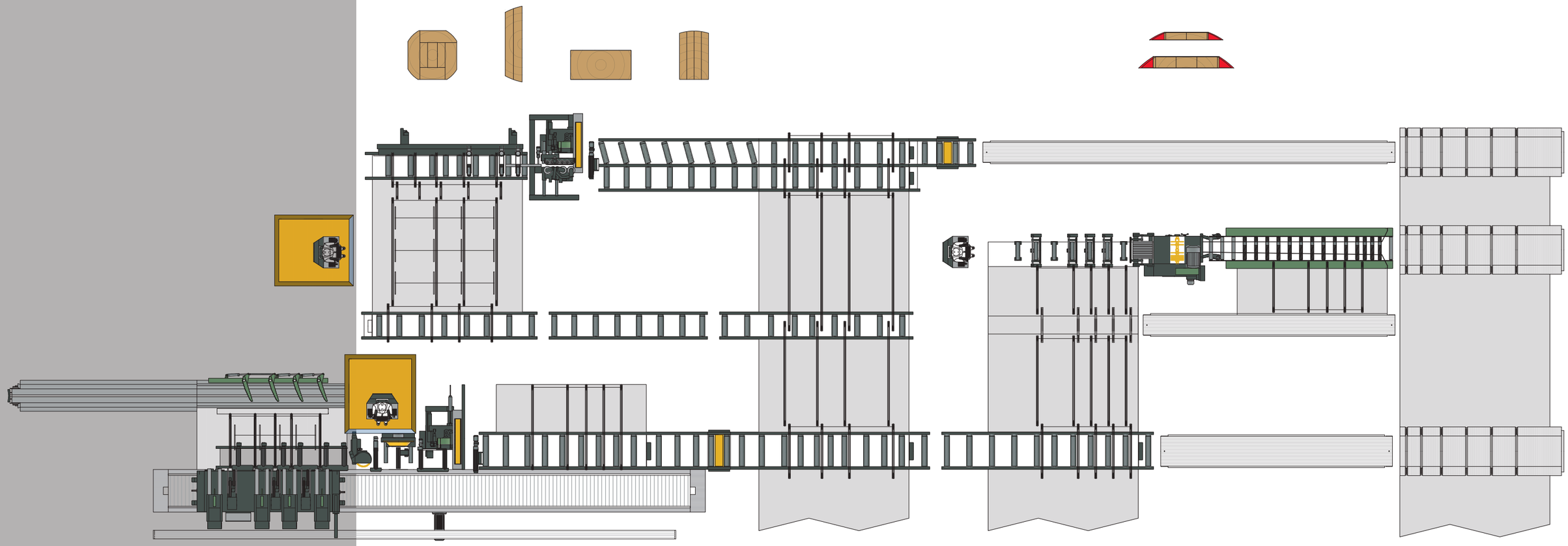






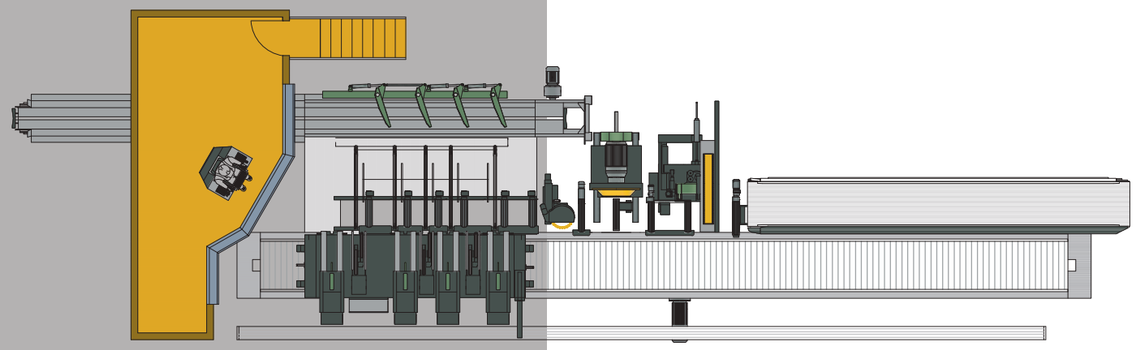
LOG BAND SAWMILL
EXAMPLE 3

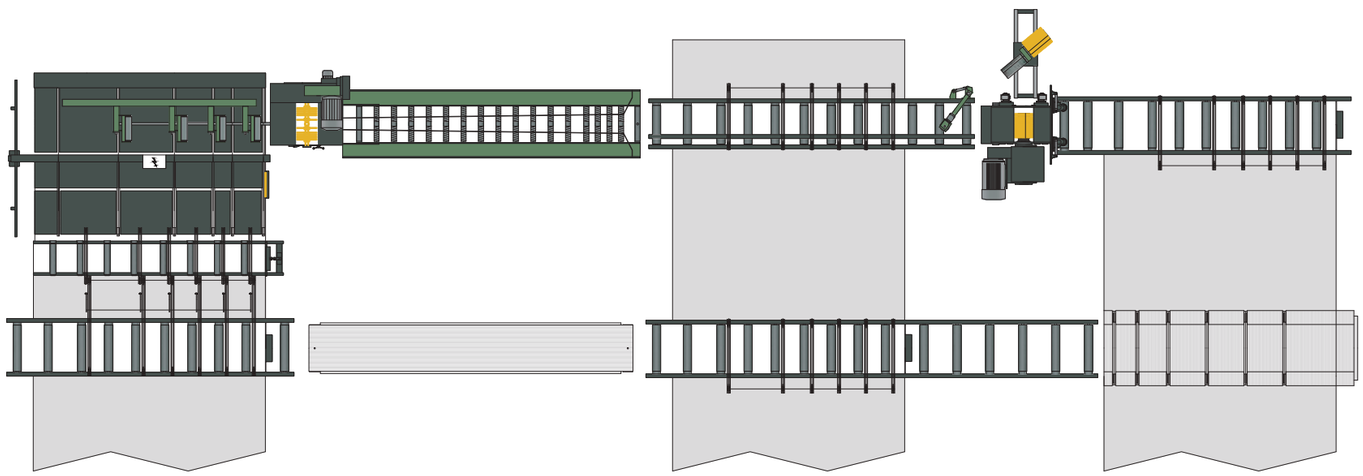
- Log band sawmill 17° slanted with EW2, PF 19, EBB 1800 for log length up to 6m.
- Combined with a band resaw system EBT 1800 and an edger/rip system DK 90.



LOG BAND SAWMILL
EXAMPLE 4

- Log bandsaw mill 17° slanted with EW 2, PF 19, EBB 1800 for log length up to 6m.
- Combined with edger and resaw system Combimes-DK 90 with 4 moveable saw heads plus fix mounted saw quills, for cutting heights from 17–160 mm,
- Double arbour circular cant resaw NKU 160 for 160mm sawing height with fixed mounted saws.





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