REDUCING TECHNOLOGY

PF19
QuadroLine
DWK
VNK
FR12
NKU
FVHTK

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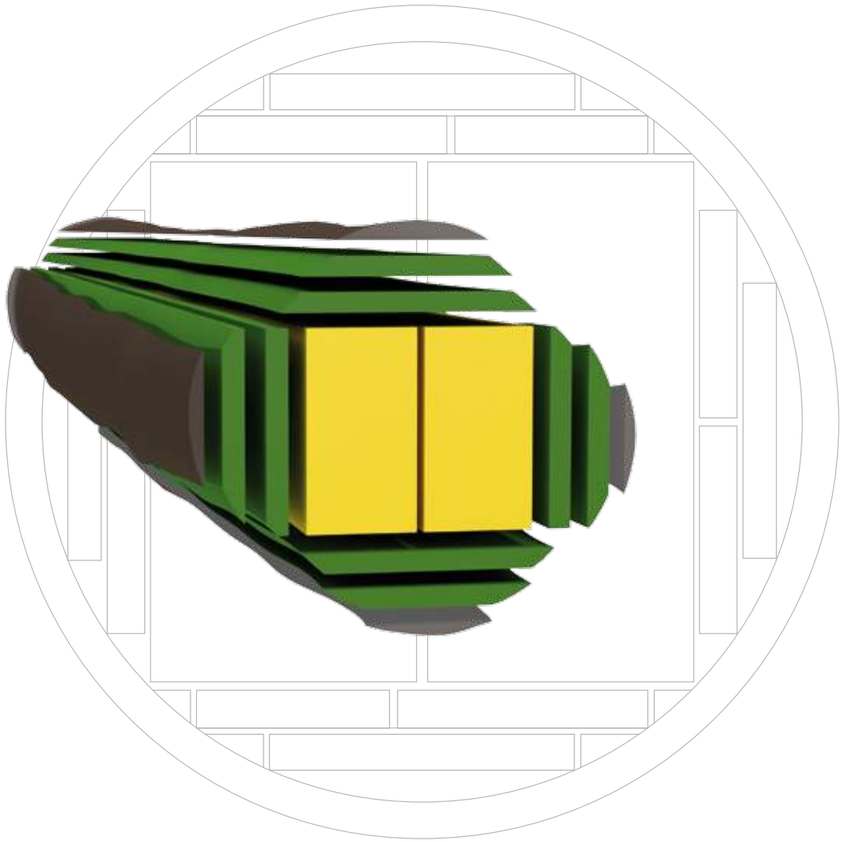
EWD
The SawLine Company™

REDUCING TECHNOLOGY

For decades EWD Reducing Technology stands for custom made sawline solutions for medium to large size sawmills.



Reducing technology is a sawmill industry term describing a process using chipper canter units to chip off the round slabs of the log and cant before sawing machines cut off the side boards from the center product cant. The side boards are then sent to separate optimizing edger systems.

EWD uses as sawing machines bandsaws as well as circular saw machines.

The reducing technology is able to handle a very large log diameter range from 10 cm to 75 cm. The log length range varies from a 1,8 m log up to 14 m long logs.

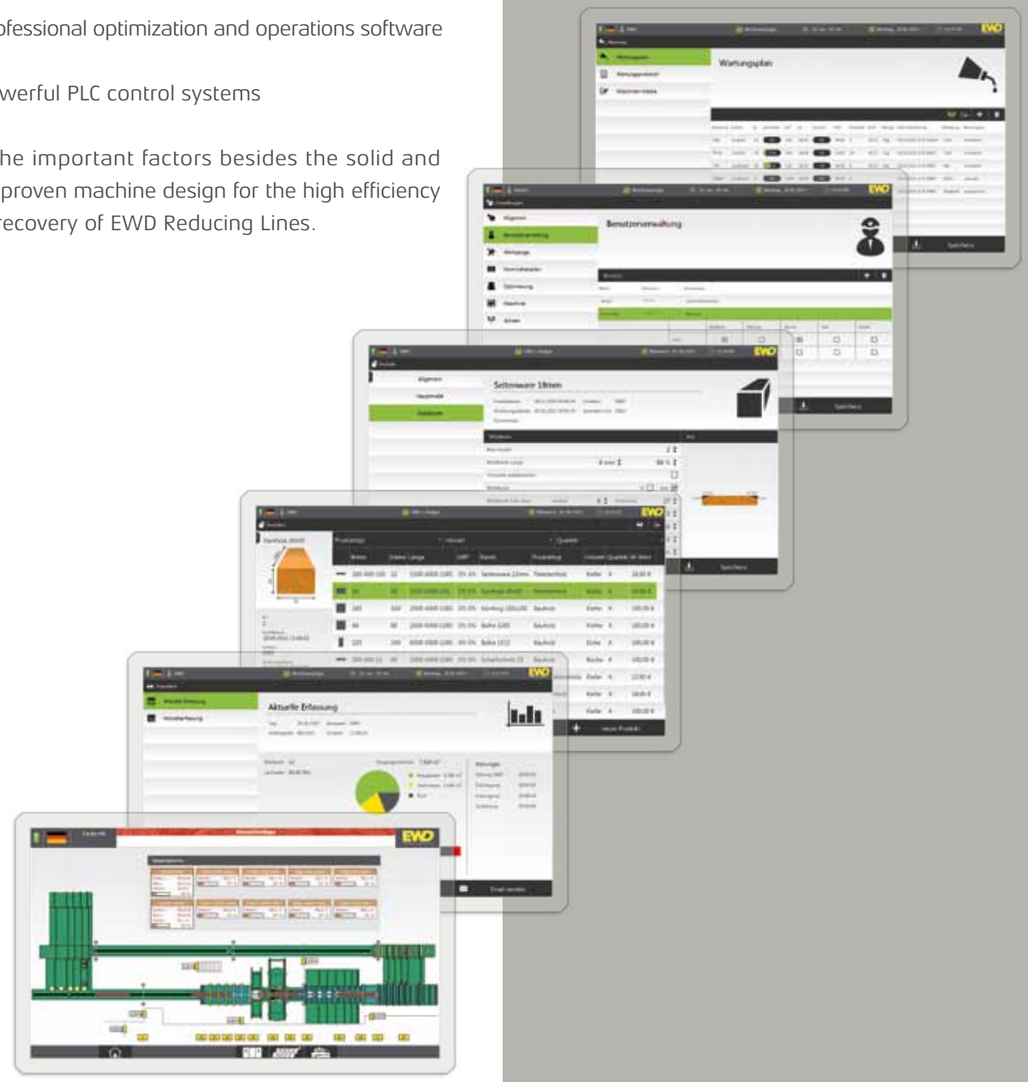
EWD builds custom made solutions for the very individual needs of the international sawmill industry. The reducing technology is used for production capacities of 20 to 200 m³ log intake per hour.

EFFICIENCY AND RECOVERY WITH eWOOD-TECHNOLOGY

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.

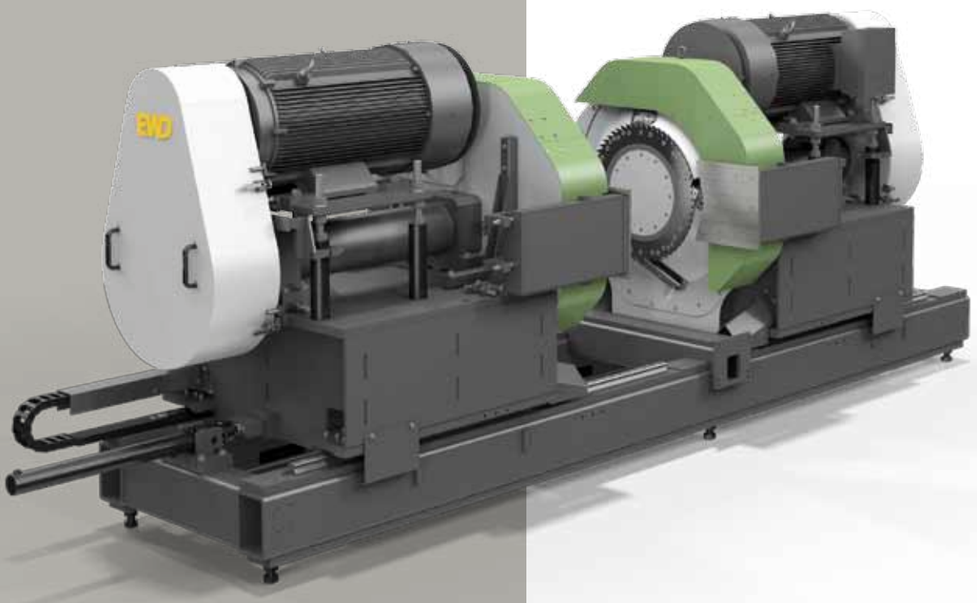
- State of the art scanning and sensor technology
- Professional optimization and operations software
- Powerful PLC control systems

are the important factors besides the solid and time-proven machine design for the high efficiency and recovery of EWD Reducing Lines.



PF19
Universal chipper canter

for medium to large Reducing and Profiling lines



The chipper canter PF 19 is used in Circular saw or Reducer Bandsaw lines and also in Profiling lines for chipping of two parallel faces on logs or cants. The width adjustment of the chipper head supports is done by servo-hydraulic setworks.

The produced chips meet the high quality requirements of the pulp industry.

The chipper head revolutions are controlled by frequency converter as a function of feed speed and desired chip lengths.

CHIPPER HEAD
Straight knives / Spiral knives

The chipper canter PF 19 can be fitted with either straight knives, spiral knives or stepped knives heads.

The different head types are matched by the number of tools installed to the speed range desired.

All heads are fitted with either pre- or post sawing circular saw rings, depending on the purpose.

TECHNICAL DATA PF19

Chipper head diameter		
Straight knives chipper head	mm	1240
Spiral knives chipper head	mm	1260
No. of main knives (straight knives head)	pcs.	3, 4, 6
No. of spirals (spiral knives head)	pcs.	3, 4, 5
Chipping depth per head		
Straight knives chipper head	mm	190
Spiral knives chipper head	mm	180
Chipping height above chain bed max.		
Straight knives chipper head, pre-sawing	mm	612
Straight knives chipper head, post-sawing	mm	505
Spiral knives chipper head, pre-sawing	mm	550
Distance between the chipper heads	mm	60 – 700
Opening side for tool change	mm	900
Feed speed	m/min.	20 – 200
Drive power	kW	2x75 – 2x250 (@ 1500 rpm)
Machine weight with drive motors	t	13,0

QUADROLINE
Reducing – Bandsaw line

EWD Bandsaw Technology stands for high recovery, flexibility and high performance.

The demanding job of the saw filing of bandsaw blades is now done automatically by a new generation of stellite-tipping, grinding-, levelling and tensioning machines with highest reliability.

New bandsaw steel qualities allow longer hours of operation with even thinner blade thickness.

FBS Flying Bandsaw
active saw guide system
with magnets

for:
- higher saw strain
- higher sawing accuracy
- higher feed speeds
- longer operating hours

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

QUADROLINE
Reducing – Bandsaw line

The reducer bandsaw allows to process large sawing heights with a minimum saw kerf. The positioning of the saw lines and therefore the production of any lumber size required is basically unlimited.

Variable speed drives for the sawing speed allow the adjustment of the sawing process to fit the different cutting conditions.

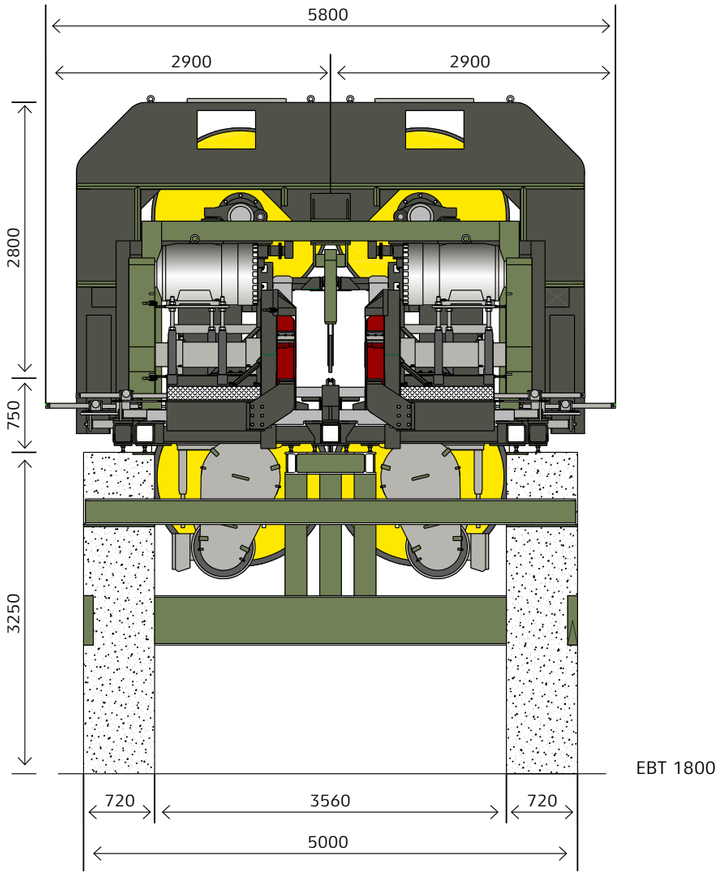
With the modular design of the EWD Bandsaw Technology every conceivable task in today's sawmill industry can be solved.

The combination of bandsaw, circular saw and canter technology is almost without limits.

With feed speeds in excess of 120 m/min, the reducer bandsaw technology not only satisfies highest recovery requirements, but also the need for high throughput.

TECHNICAL DATA

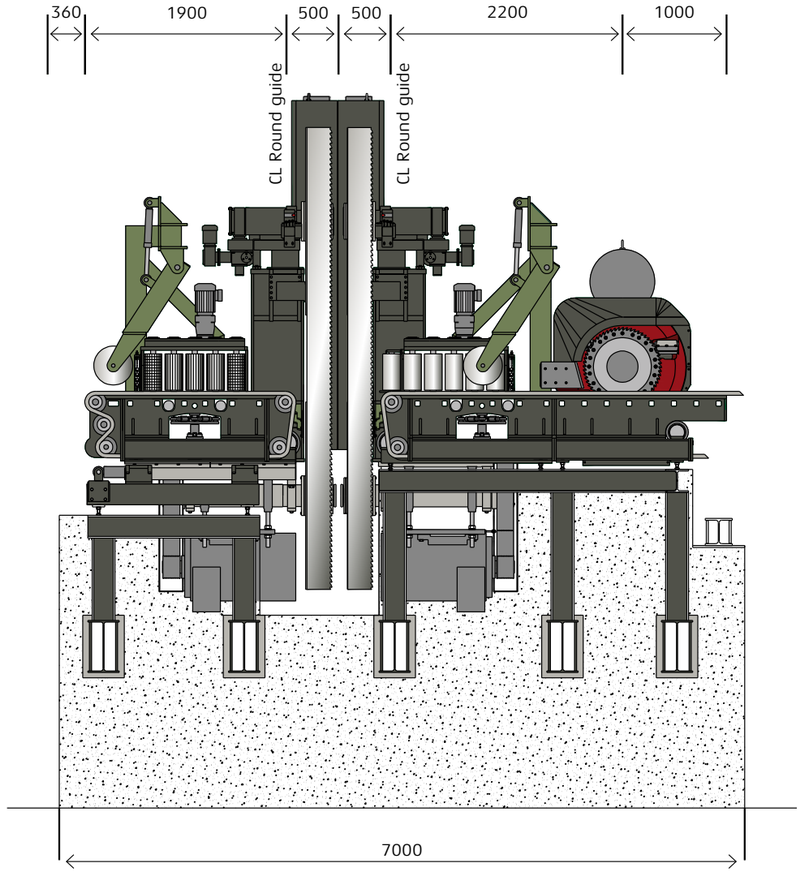
"Modul" Bandmills EBT 1400, 1600, 1800



TECHNICAL DATA OF "MODUL"- BANDMILLS

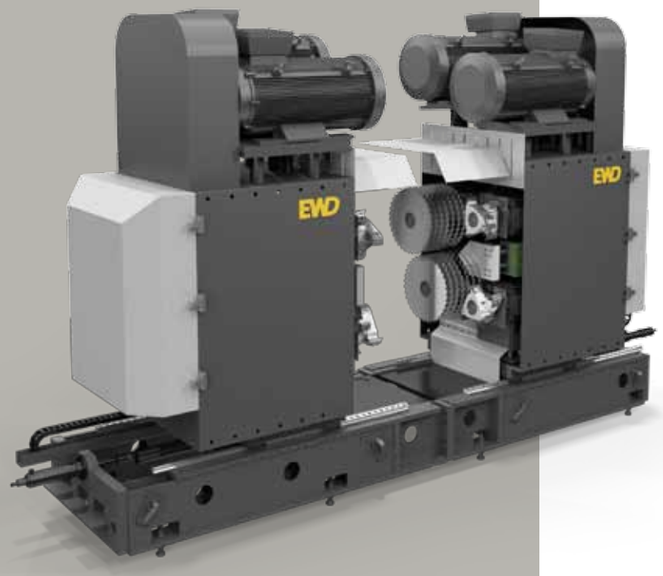
TYPE		EBT 1400	EBT 1600	EBT 1800
Wheel diameter	mm	1400	1600	1800
Wheel face width	mm	160/200	190/230	190/210/230
Saw blade width	mm	180/206	206/250	206/230/250
Saw blade thickness max.	mm	1,47	1,65	1,83
Saw blade strain max.	N/mm²	200	200	200
Drive motor size	kW	75-90	75-110	90-132

TECHNICAL DATA



LOG AND CANT RESAW
DWK

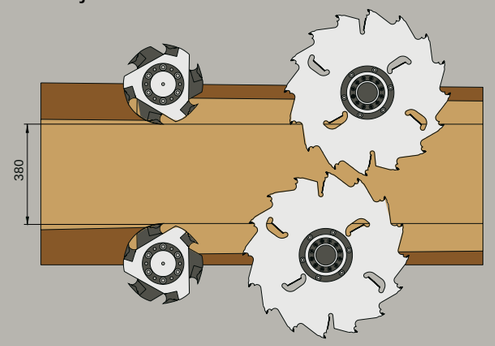
Flexible double arbor circular saw for primary and secondary breakdown with excess height cutters and hydraulically height-adjustable saw arbors.

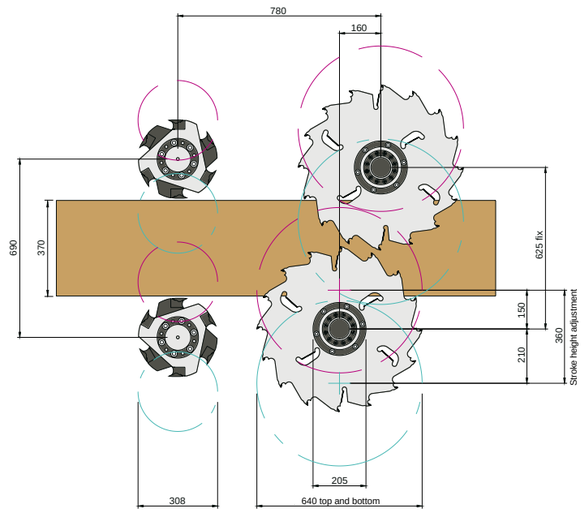


The flexible double arbor circular saw unit DWK 700 is used as primary-, secondary break down or combination machine in medium to large sawmills. In total 6 pairs of saw heads can be positioned individually with very precise servo-hydraulic setworks.

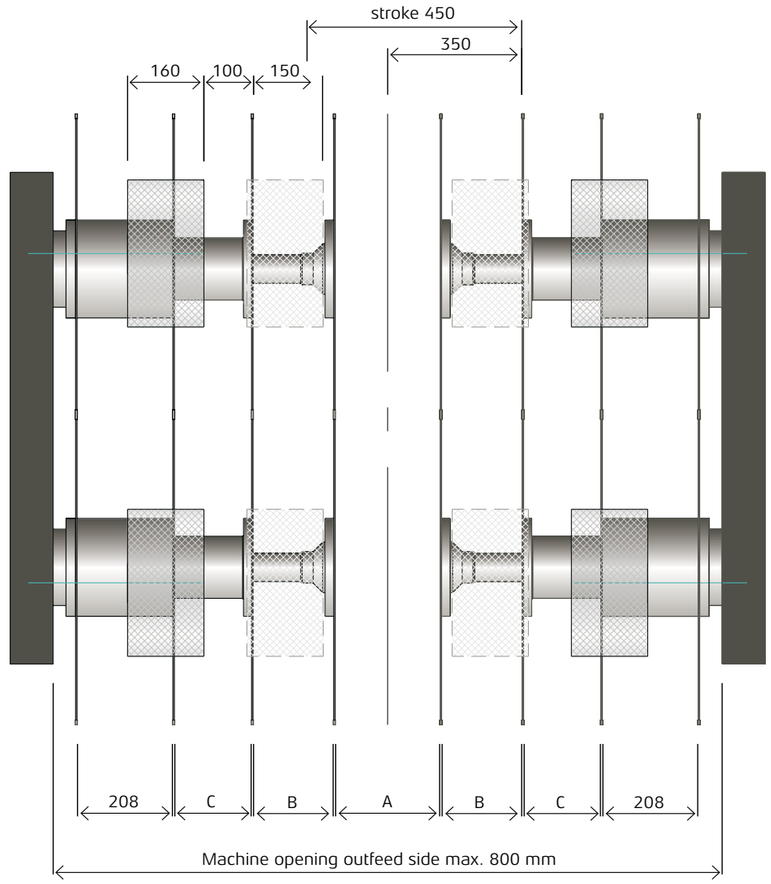
For a uniform distribution of the actual sawing heights on top and bottom saw blades, the saw arbors are automatically positioned in height. For the use as primary break down machine the DWK 700 is fitted with excess height cutters, which are adjusted in height together with the saw arbors. This tool arrangement enables a very efficient sawing operation of even large diameter logs.

Saw arbor height adjustment distances





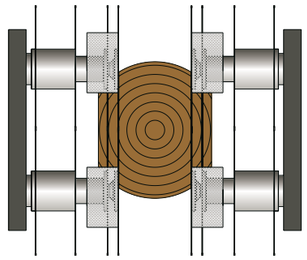
SAW POSITIONING DISTANCES
(in mm)



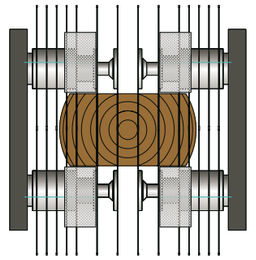
A = 18-650 mm C = 18-168 mm
B = 18-208 mm A max. = 1600 mm in tool change position

Application examples DWK 700

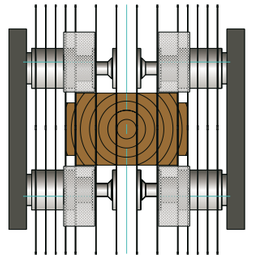
Primary break down



Secondary break down



Cant and profile sawing



LOG AND CANT RESAW
DWK / VNK

Flexible double arbor circular saw
DWK with excess height cutters

Flexible double arbor circular saw
VNK without excess height cutters

TECHNICAL DATA DWK 700

Log diameter (described in a tube) max.	mm	700 (800)
Log/cant length min.	m	2,5
Sawing height primary breakdown with excess height cutters	mm	380
Sawing height secondary break down	mm	48 - 370
Saw sleeve length fix mounted saws per side	mm	208
Saw sleeve diameter	mm	205
Machine opening outfeed max.	mm	800
Saw blade diameter top/bottom arbor	mm	640
Feed speed max.	m/min	140
Drive motor size	kW	2x132 - 2x250 (at 1500 rpm)
Machine weight with drive motors (2x200 kW)	t	25
Excess height cutters		
head diameter	mm	308
head width	mm	160
drive motors	kW	4x30 - 4x37 (at 3000 rpm)

High production reducer saw line with double arbor circular saw DWK

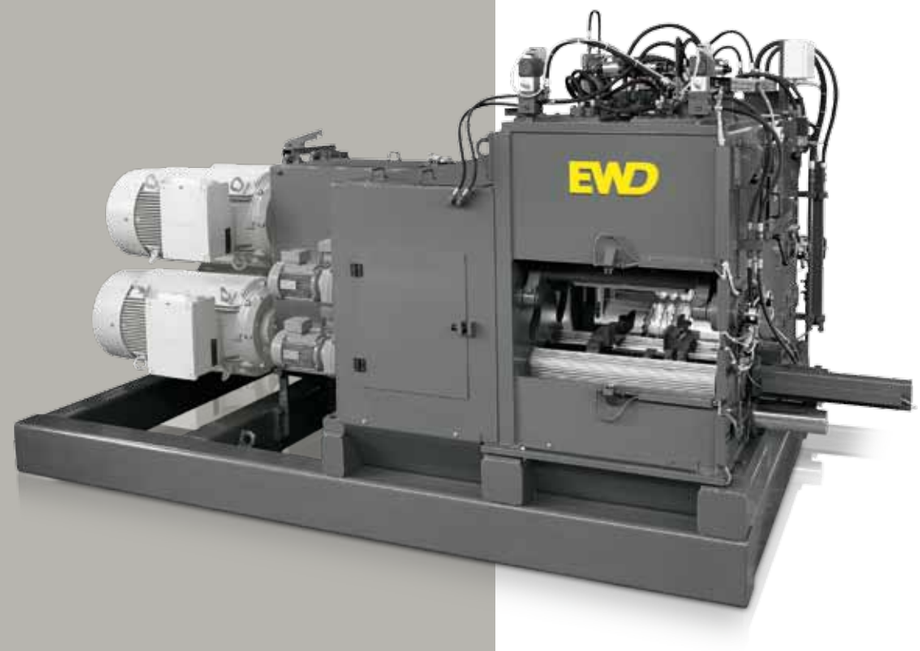
TECHNICAL DATA VNK 300 / VNK 360

Sawing height	mm	75 – 310 (*75 – 360)
Log/cant length min.	m	2,4
Saw sleeve length fix mounted saws per side	mm	115
Saw sleeve diameter	mm	240
Machine opening outfeed max.	mm	700
Saw blade diameter top/bottom arbor	mm	610 (*655)
Feed speed max.	m/min	140
Drive motor size	kW	4x132-4x200 (at 1500 rpm)
Machine weight with drive motors (4x200 kW)	t	20
		*VNK 360

Medium production reducer saw line with double arbor circular saw DWK

RESAW FR12
Double arbor circular resaw with fix-mounted saw blades

The double arbor circular resaws FR12 and NKU 150 are each fitted with two individually height adjustable saw arbors with hydraulic lift/lowering.



TECHNICAL DATA FR12

Sawing height double arbor mode	mm	75 – 310
Sawing height single arbor mode	mm	75 – 130
Saw sleeve length fix mounted saws	mm	500
Cant length min.	m	2,5
Infeed width with lumber guide bars	mm	60 – 620
Infeed width without lumber guide bars	mm	900
Saw arbor diameter for sleeve installation	mm	105
Saw arbor diameter for direct mounted saws	mm	150
Height adjustment top saw arbor	mm	150
Height adjustment bottom saw arbor	mm	65
Saw blade diameter double arbor sawing	mm	430 – 560
Drive motor size	kW	2 x 132 – 2 x 315
Feed speed	m/min	25 – 60 (at 1500 rpm)
		60 – 200 (at 3000 rpm)
Machine weight with drive motors (2x250 kW)	t	15

RESAW NKU 150
Double arbor circular resaw with fix-mounted saw blades

TECHNICAL DATA NKU 150

Sawing height	mm	40 – 160
Passage height max.	mm	180
Cant length min.	m	1,0 (0,8)
Cant width max.	mm	620
Useable saw sleeve length	mm	615
Machine opening infeed (with lumber guide bars)	mm	625
Machine opening outfeed	mm	900
Saw blade diameter top and bottom	mm	390
Saw arbor diameter	mm	110
Drive motor size	kW	2x160 (at 3000 rpm)
Feed speed max.	m/min	100
Machine weight with drive motors (2x160 kW)	t	12

VERTICAL DOUBLE ARBOR RESAW FVHTK

TECHNICAL DATA

Passage opening max.	mm	500 x 500
Sawing width max.	mm	360
Saw blade diameter max.	mm	610
Lifting height saws mounted to drive motors max.	mm	360
Lifting height saws mounted to telescopic arbors max.	mm	150
Drive motor size	kW	2 x 80 or 110

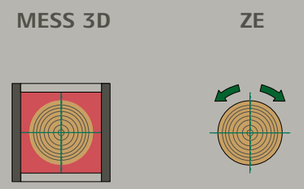
REDUCING LINE WITH MERRY-GO-ROUND EXAMPLE 1

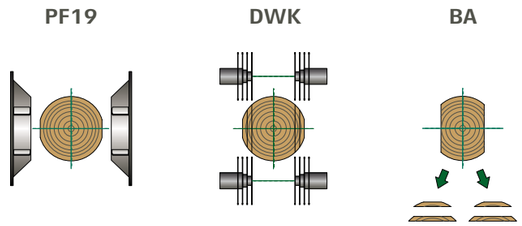
Compact reducer line with a flexible double arbor circular saw DWK as the main break down machine.

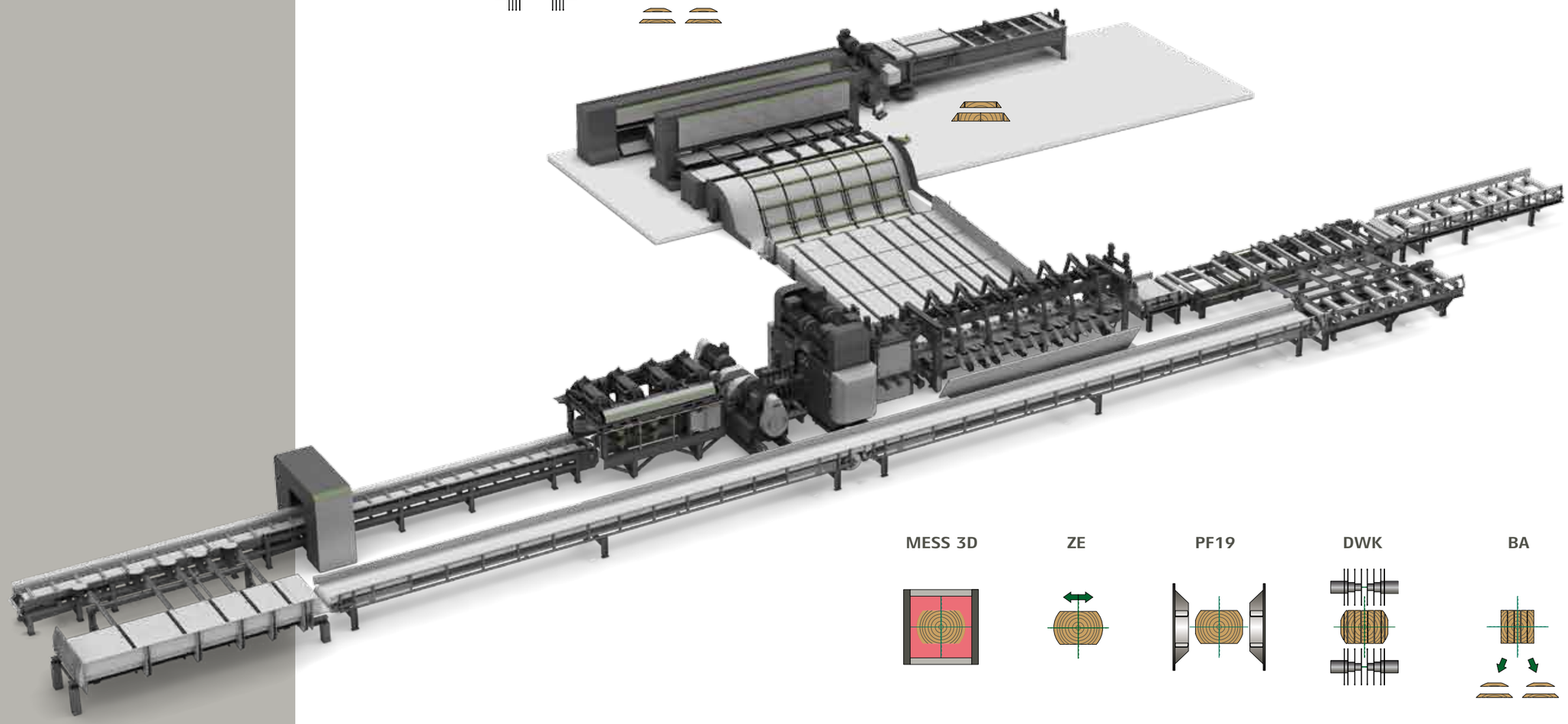
In primary break down up to 6 side boards of variable thickness and a variable thickness center cant can be sawn.

In secondary break down up to 7 center products of variable thickness can be sawn. The outer saw heads can be fitted with fix-mounted saws on saw sleeves. The standard line is designed for log length from 2,5 to 6,0 m and a maximum log diameter of 75 cm, including taper and sweep.

Feed speed range from 25 to 120 m/min.
Length of the reducing line: approx. 56 m







REDUCING LINE WITH MERRY-GO-ROUND EXAMPLE 2

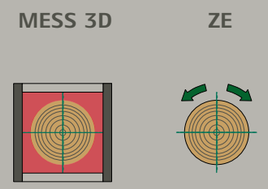
Compact reducer line with a flexible Quad Bandsaw as the main break down machine.

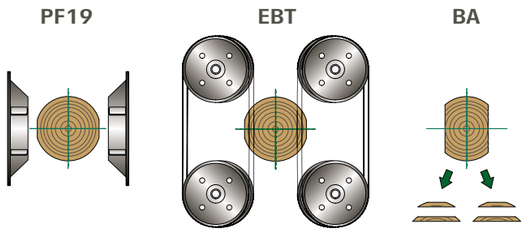
In primary break down up to 4 side boards of variable thickness and a variable thickness center cant can be sawn.

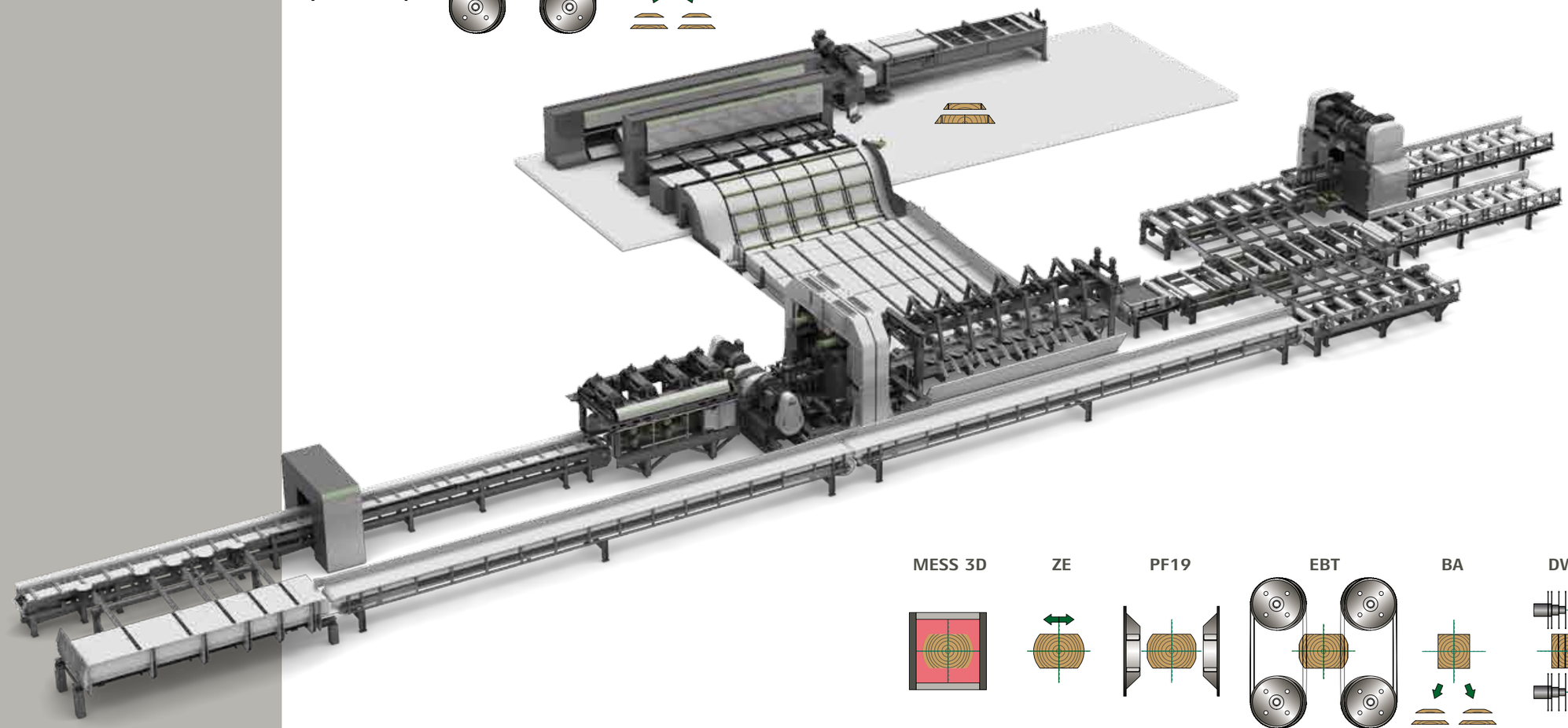
In secondary break down up to 5 center products of variable thickness can be sawn. The example shows a flexible double arbor circular saw DWK to supplement the Quad bandsaw for cant resawing.

The standard line is designed for log length from 2,5 to 6,0 m and a maximum log diameter of 75 cm, including taper and sweep.

Feed speed range from 25 to 120 m/min.
Length of the reducing line: approx. 56 m







REDUCING LINE WITH MERRY-GO-ROUND EXAMPLE 3

Reducer line with two Quad Bandsaws as the main break down machines.

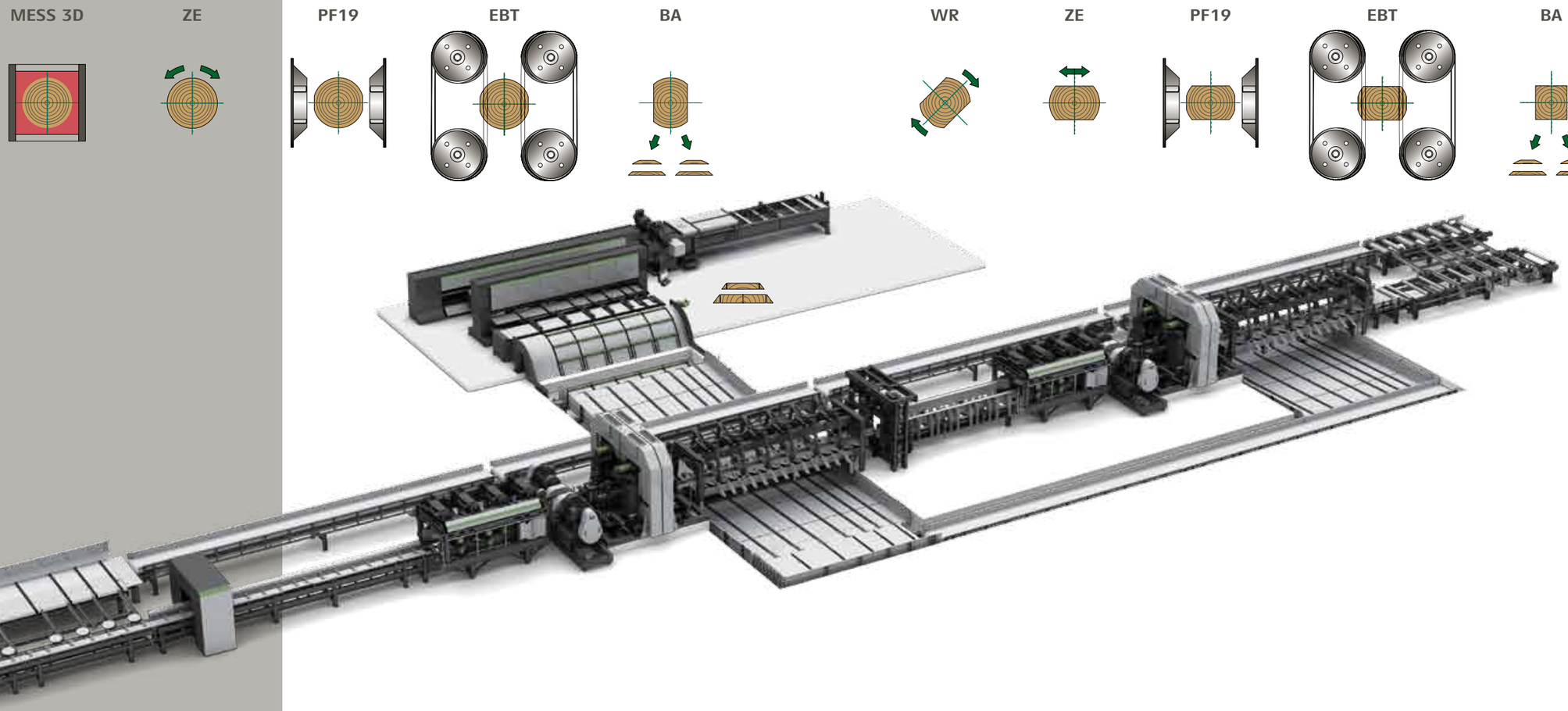
In primary break down up to 4 side boards of variable thickness and a variable thickness center cant can be sawn.

In secondary break down up to 5 center products of variable thickness can be sawn.

Smaller diameter logs can be sawn in a single pass. Large logs are sawn in a very flexible way, using the merry-go-round system.

The standard line is designed for log length from 2,5 to 6,1 m and a maximum log diameter of 75 cm, including taper and sweep.

Feed speed range from 25 to 120 m/min.
Length of the reducing line: approx. 85 m



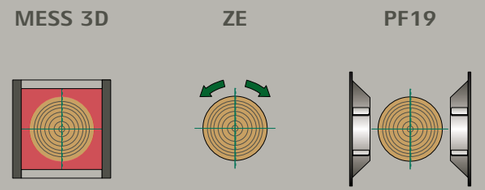
REDUCING PROFI-LINE EXAMPLE 4

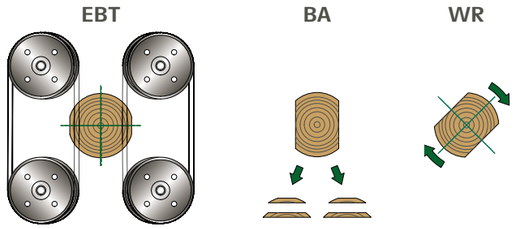
With Quad Bandsaw in primary break down

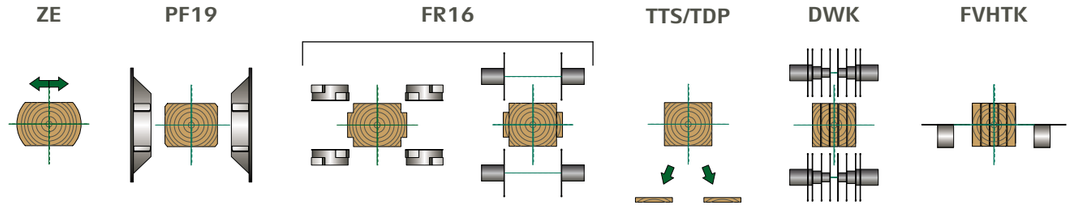
Combination Reducing and Profiling line with separate resaw group for vertical and horizontal resawing.
For log length from 2,5 to 6,1 m and a maxium log diameter of 75 cm, including taper and sweep.

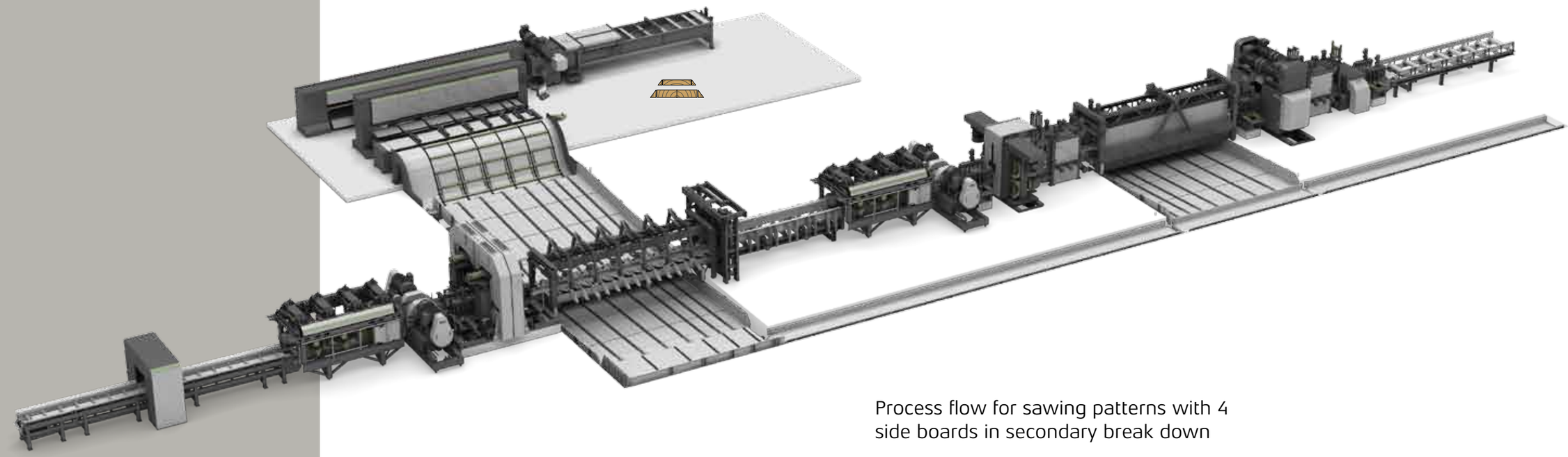
The line is designed for scan and set sawing, adjusting the tools from log to log. 5 center products of variable thickness for vertical resawing plus products sawn with the fix mounted saws, up to 2 horizontal sawlines for 3 flexible sizes. In primary break down up to 4 side boards of maximum thickness 100 mm each can be sawn.

In secondary break down 2 side baords can be profiled up to a thickness of 45 mm. Large logs can be sawn in secondary break down with up to 4 side boards, which will be sent to the optimizing edger system.
Length of the Reducing Profiling line: approx. 77 m.

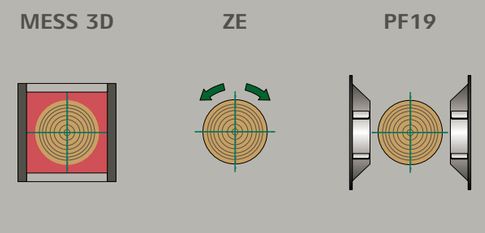


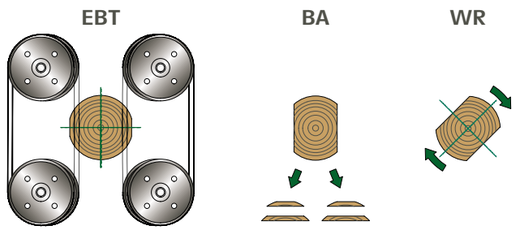


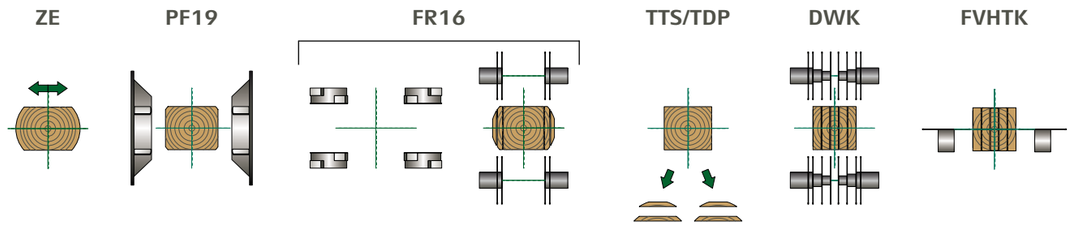




Process flow for sawing patterns with 4 side boards in secondary break down







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