

HORIZONTAL AND VERTICAL BAND SAWS

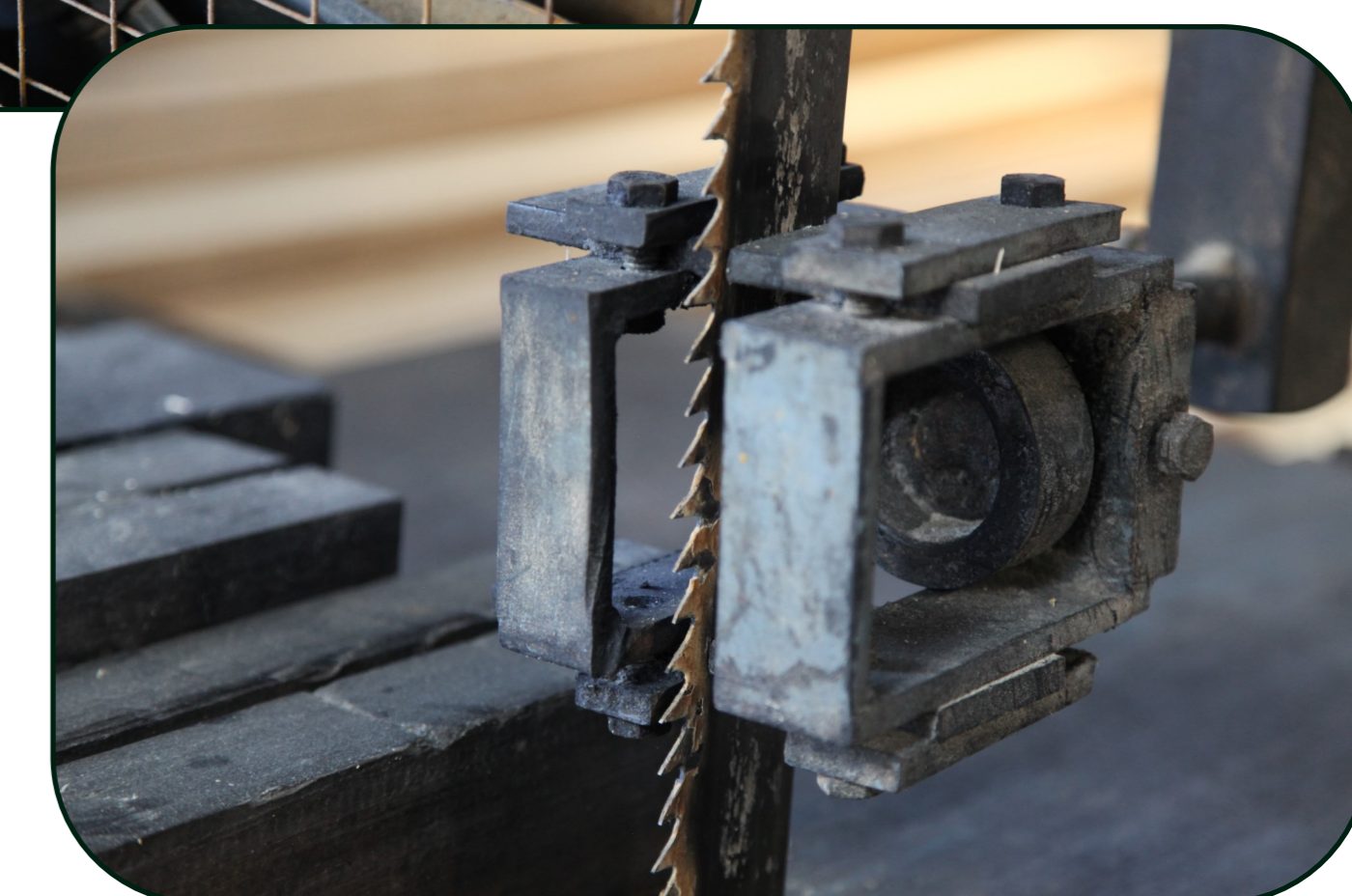
General information

- These band saws are specifically designed to be flexible in terms of log sizes and species.
- This equipment can be used for sawing any type of soft or hard wood.
- The machine has strong frames, designed for heavy duty sawmilling with double channel pillars.
- The sawmill has mechanically balanced saw wheels, mounted on a tape roller bearing that has dust proof housing.
- The saw has fitted steel protective fences for safety.
- The machine enables a high timber recovery rate of 55–70 %, when correctly operated and timber is sawn correctly.
- This kind of machine requires good operating skills in sawing timber.
- The saw has a fitted jack screw and vices for log holding.



Specifications and maintenance information

- The sawing line has the maximum sawing capacity of 15 m³ per shift (of 6 operators working for 8 hrs).
- The length of the horizontal band saw rail line is 18 meters, with a 4 m trolley length. The machine is 3 m wide at the widest part. The maximum height of the machine is 2 m.
- The vertical band saw is 2 meters high, with a table size of 104 x 107 cm.
- Weight of the horizontal band saw is 2,500 kgs, while the vertical band saw weighs 1,400 kgs.
- The maximum sawing limit in terms of height is 95cm, with a maximum cutting width of 100 cm in diameter.
- The saw blade length for the horizontal band saw is 31 feet (appr. 9,5 m) and for the vertical saw is 24 feet (appr. 7,3 m). Both saws can use saw blades of 2,5–3 inches (6,35 –7,62 cm). The thickness of saw blades should be 1,1 mm.
- The horizontal saw has a spindle speed capacity of 600 rpm and the vertical saw 500 rpm.
- The required power for the horizontal band saw is 15 kWh and 10 kWh for the vertical band saw.
- The machine must be calibrated and well balanced when installed.
- The bearings must be serviced every three months and changed when necessary.
- The machine must be lubricated at least twice per month.



Purchase information

- These band saws are a low cost option for sawmilling.
- Bandsaws can be purchased from many countries (for example China, India, South Africa).
- The following costs incurred while procuring this machinery:
 - Purchase price (incl. freight and insurance) for the horizontal band saw: 5,900 EUR and vertical band saw: 3,200 EUR.
 - Import tax 27 %
 - VAT on purchase and import: 18 %
 - Clearing and port charges: 3,600 EUR for the horizontal band saw and 1,800 EUR for the vertical band saw
 - National transportation cost: 450 EUR for the horizontal band saw and 350 EUR for the vertical band saw
- The issues to be considered when buying the machine:
 - Capacity
 - Availability of spare parts
 - Availability of skilled operators
 - Warranty

Cost-profit estimates

Description	Displayed horizontal band saw	Displayed vertical band saw
Suitability	Sawn wood and small-scale furniture and joinery production	
Investment cost	12,550 EUR	6,800 EUR
Number of operators	3	3
Electricity	15 kWh (average estimate 11,25 kWh)	10 kWh (average estimate 7,5 kWh)
Electricity costs (monthly, based on one 8 hour daily shift, working 5 days per week)	630,000 TSH	420,000TSH
Maintenance	Daily (before switching machine on): checking and tensioning the sawblades, lubricants and bearing, cleaning the saw area from dust, sharpening the blades (required parts: saw doctoring equipment, lubricants) Monthly: adjusting bearing, checking of coils (required parts: bearings, saw blades, tension meter, coils)	
Maintenance costs per month (for the whole line)	72,000 TSH (labour), 80,000 TSH (parts), 400,000 TSH (saw doctoring)	
Max annual production	3,600 m ³	

Services related to this machine at FWITC

- Testing client's timber samples .
- Demonstration services for potential buyers and other stakeholders.
- Advisory services for potential buyers and other stakeholders.
- Training SME owners, managers and operators on the use of the machine.
- Training on proper sawing methods, and in maximizing the recovery rate.

Contact and how to get there

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Driving instructions: Junction of CF Madibira Rd., drive straight about 1,5 km. The junction to FWITC is opposite to the briquetting factory, on the left side of the road.

About the Private Forestry Programme (PFP)

The Private Forestry Programme (PFP) supports private forest ownership, particularly the establishment and management of plantations by smallholders, as well as the wood industry and the development of mature timber markets that would benefit all stakeholders. The programme operates in four regions: Iringa, Njombe, Morogoro and Ruvuma.

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