

MULTIBLADE SAWING (BREAKDOWN) MACHINE FOR LOGS AND RE-SAW FOR PLANKS

General information

- The log breakdown sawing machine is specifically designed for the fast and quality sawing of especially small diameter (up to 25 cm) logs.
- The cant multiblade sawing machine can be used for re-sawing cants of planks produced with the breakdown saw.
- These machines can be used for all types of soft or hard wood.
- The use of several circular saw blades at the same time ensures efficient cutting speed.
- Both machines have automatic centring to improve recovery rate, which can rise up to 45 %.
- Both machines have a fixed spacer, which enables faster changing of blades between cutting sizes.
- The breakdown saw has a feeding unit with an adjustable tension adapter. This function assists in feeding all logs with suitable, individual speed into the machine.



Specifications and maintenance information

- The sawing line has the maximum sawing capacity of 15 m³ per shift (of 4 operators working for 8 hrs).
- The sizes of both saws is 2900 x 1400 x 1600 mm (length–width–height) per machine, with the feeding line being 5 meters.
- Weight of the breakdown saw is 800 kgs and of the re-saw 700 kgs.
- The machine can cut logs up to 25 cm.
- The diameter for the breakdown saw blade is 355 mm with a centre hole of 50 mm with 18 mm teeth, while the blade size for the re-saw is 230 x 50 mm with 24 mm teeth.
- The breakdown saw has a spindle speed capacity of 3,000 rpm, while the re-sawing machine has a spindle speed of 4,500 rpm.
- Power requirement for the breakdown saw is 62 kWh and 57 kWh for the re-saw.
- Before commencing operation, the cooling water pipe connection should always be checked and maintained.
- The saw blades should be tensioned, sharpened and set up every 1-2 hrs.
- The machine should be checked for lubrication every time before starting operations.
- The dust and saw dust in the machine electric box should be removed daily.
- Bearings of the machine should be changed at least once a year, or earlier if worn out.



Purchase information

- These machines have been purchased from China, but these machines are also available from Finland.
- The following costs incurred while procuring this machinery:
 - Purchase price (incl. freight and insurance) for the breakdown saw: 17,000 EUR and re-saw: 16,000 EUR.
 - Import tax 27 %
 - VAT on purchase and import: 18 %
 - Clearing and port charges: 800 EUR per machine
 - National transportation cost: 1,400 EUR per machine
- The issues to be considered when buying the machine:
 - Capacity
 - Availability of spare parts
 - Availability of skilled operators
 - Warranty
 - Maintenance routine for the machine

Cost-profit information

Description	Breakdown saw	Re-saw
Suitability	Sawn wood and small-scale furniture and joinery production	
Investment cost	27,000 EUR	25,000 EUR
Number of operators	2	2
Electricity	62 kWh (average estimate 40 kWh)	57 kWh (average estimate 30 kWh)
Electricity costs (monthly, based on one 8 hour daily shift, working 5 days per week)	2,2 mill TSH (based on average estimate)	1,7 mill TSH (based on average estimate)
Maintenance	Daily (before switching machine on): checking the cooling water pipes, lubricants and bearing, cleaning the electrical box from dust, checking the carbide teeth of the saw blades and sharpening the blades (required parts: saw doctoring equipment, lubricants) Monthly: adjusting the cylinder pressure (required parts: meter reading equipment) Yearly: changing the bearing of the machine (required parts: bearings, saw blades, lubricants)	
Maintenance costs per month (for the whole line)	36,000 TSH (labour), 40,000 TSH (parts), 200,000 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.

The Programme is supported by the Ministry for Foreign Affairs of Finland and the Ministry of Natural Resources and Tourism of Tanzania.