

Technical sheet for Semi –Automatic Fiber Extractor Machine:

General Information:

The Semi-Automatic Banana Fiber Extractor is designed to extract quality fiber from banana pseudostems efficiently. The machine uses a rotating drum equipped with blades to scrape and separate the fiber while minimizing manual effort. It operates using a 3-phase electric motor and includes adjustable feeding mechanisms for controlling fiber extraction quality.

Working Principle:

The motor drives the rotor drum via a pulley and belt system. The drum, equipped with multiple blades, scrapes the outer layers of banana pseudostems fed manually through the adjuster rollers. The extracted fibers pass through, while the waste is collected in the lower waste box.

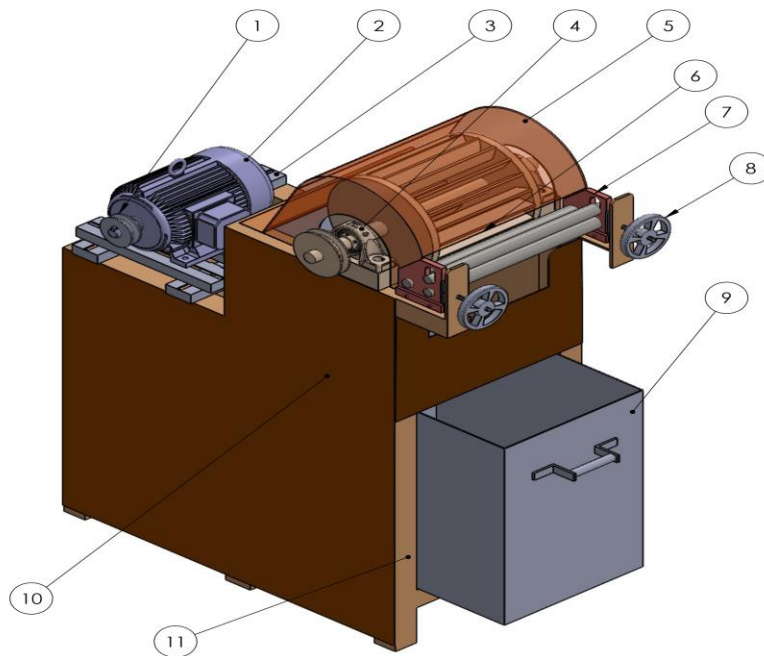


Figure: Semi Automatic Banana Fiber Extractor

Component Name:

1. Pulley: 3 inch in diameter 24 mm bore in motor, 4.5 inch in roller with 28 mm bore
2. Motor: 3 HP , 3 phase 1440 RPM
3. Motor base
4. Bearing : SKF P206, Quantity: 2 pcs
5. Rotor cover: 2mm thickness Mild steel sheet
6. Rotor Drum: blade(9 inch length, 6mm thickness), quantity: 20, side disc: 9 inch diameter, 16 mm thickness
7. Feeding adjuster: 3 shaft with 32mm diameter and 14 inch length
8. Adjuster holder
9. Waste collector box
10. Body Cover sheet: 1.5 mm thickness ,mild steel
11. MS square pipe: 2 inch x 2.5 mm for body frame
- 12.

Part No.	Component Name	Specification / Description
1	Pulley	3-inch diameter (motor side, 24 mm bore), 4.5-inch diameter (rotor side, 28 mm bore), B type Pulley
2	Motor	3 HP, 3 Phase, 1440 RPM or Single Phase
3	Motor Base	Rigid mounting base for motor stability
4	Bearing	SKF P206, Quantity: 2 pcs, both sides of the rotor
5	Rotor Cover	2 mm thick Mild Steel Sheet with Hinge for flexible opening and closing
6	Rotor Drum	- Blade: 9-inch length, 6 mm thickness - Quantity: 20 blades - Side Disc: 9-inch diameter, 16 mm thickness
7	Feeding Adjuster	3 shafts, each 32 mm diameter × 14-inch length
8	Adjuster Holder	Steel holder for feeding adjustment
9	Waste Collector Box	Enclosed MS box for fiber residue collection(Slurry collection)
10	Body Cover Sheet	1.5 mm thick Mild Steel Sheet
11	Frame Structure	MS Square Pipe: 2-inch x 2.5 mm thickness for main body frame
12	Overall Dimensions	450 mm X 800mm X 1000 mm(L X B X H)
13	Weight (Approx.)	150 KG

Safety & Maintenance:

- Ensure the machine is properly grounded before operation.
- Keep hands away from feed rollers and rotor drums during operation and tight rotor cover properly.
- Regularly inspect blades and bearings for wear.
- Clean waste collector after each use to prevent rusting and clean the whole machine after using it.