

4 LANE PNEUMATIC DEHUSKER

Efficient and high-quality macadamia dehusking with Protea Engineering's 4 Lane Pneumatic Dehusker. Specifically designed for optimal performance, this machine is perfect for maximising your throughput and maintaining a high dehusking percentage.

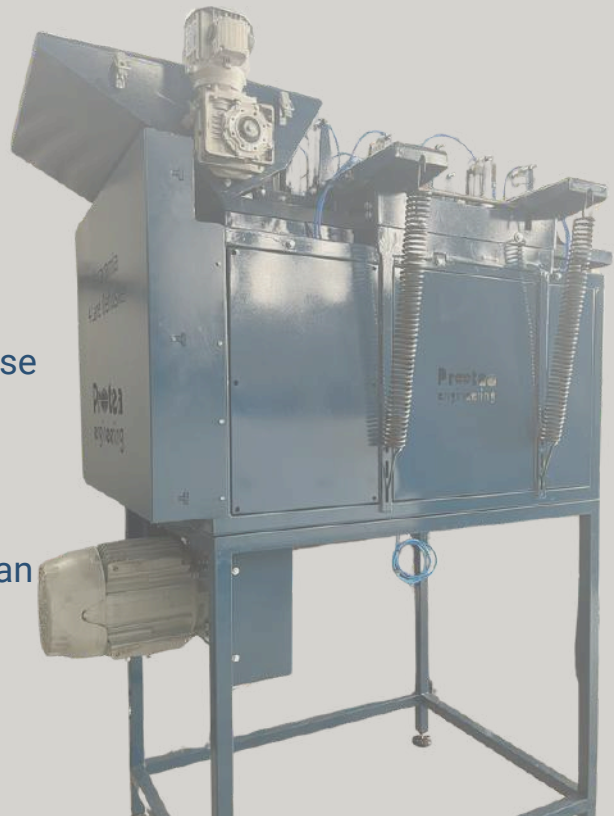
Capacity: Up to 4000kg/hr NIH

Nut is dehusked by travelling between a continuous chain and spiral scroll, resulting in dehusked nut out the end of the machine, ready for sorting.



KEY FEATURES

- Advanced Pneumatic Control: 20 pneumatic cylinders, independently controlled via 5 rows.
- Powerful Drive System: Chain-driven by an 11kw 3-phase Phase Motor.
- Integrated Agitation: Nut agitator with a 0.55 kW 3-phase motor for consistent feed efficiency.
- High Efficiency: Estimated 95% dehusking efficiency, providing you with superior performance.
- Designed to fit into existing equipment lines; heights can be modified to suit.
- Dimensions: 2100x1240x1560mm, 1950 kg.
- 12 Month Warranty.



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1 LANE PNEUMATIC DEHUSKER

Protea Engineering's 1 Lane Pneumatic Macadamia Dehusker is designed for small-scale macadamia nut dehusking operations, providing efficient and consistent results. This machine leverages pneumatic pressure settings, a robust motor, and a well-engineered design to ensure a high-quality dehusking process with minimal manual intervention

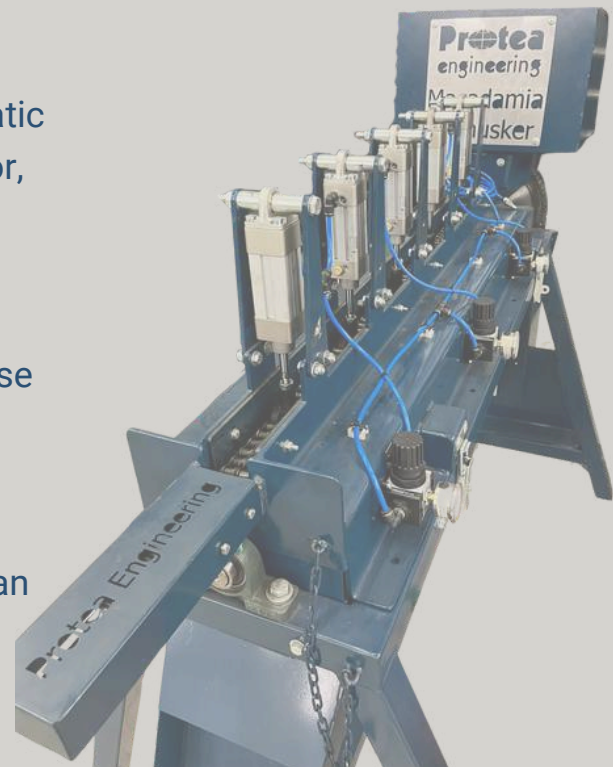
Capacity: Up to 500kg/hr NIH

Nut is dehusked by travelling between a continuous chain and spiral scroll, resulting in dehusked nut out the end of the machine, ready for sorting.



KEY FEATURES

- **Advanced Pneumatic Control:** Equipped with 5 pneumatic cylinders, each with its own constant pressure regulator, allowing for precise dehusking pressure adjustments.
- **Powerful Drive System:** Chain-driven by an 1.5kw 3-phase Phase Motor.
- **Integrated Agitation:** Nut agitator with a 0.18 kW 3-phase motor for consistent feed efficiency.
- **High Efficiency:** Estimated 95% dehusking efficiency, providing you with superior performance.
- **Designed to fit into existing equipment lines;** heights can be modified to suit.
- **Dimensions:** 2000x1000x1480mm,
- **12 Month Warranty.**



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10M³ DRYING BIN

Efficiently dry your macadamia nuts with Protea Engineering's high-capacity 10m³ Drying Bin, designed to preserve quality and enhance flavour. This essential piece of equipment ensures that your nuts reach the ideal moisture content, preventing mould growth and maintaining their natural goodness.

Capacity: Up to 8000kg Wet NIS

Drying process reduces moisture content from 30% to 6% over 6-10 days, depending on the drying method.



KEY FEATURES

- Manufactured from laser-cut galvanised steel with a modular bolted assembly for easy installation.
- Optimised Airflow: 0.75kw 3 Phase axial fan side mounted on the bin achieving 1m³ per second airflow. Perforated base to allow balanced airflow through the nuts.
- Nut Discharge: Sliding gate fitted at the base for easy nut discharge, operable from walkway height.
- Dimensions: 2300x2300x3100mm.

Optional Add-Ons:

- Access Ladders & Walkway: With safety rails for easy and safe access.
- Soft Let Down Cascade Chutes: For gentle loading of nuts into the drying bins.



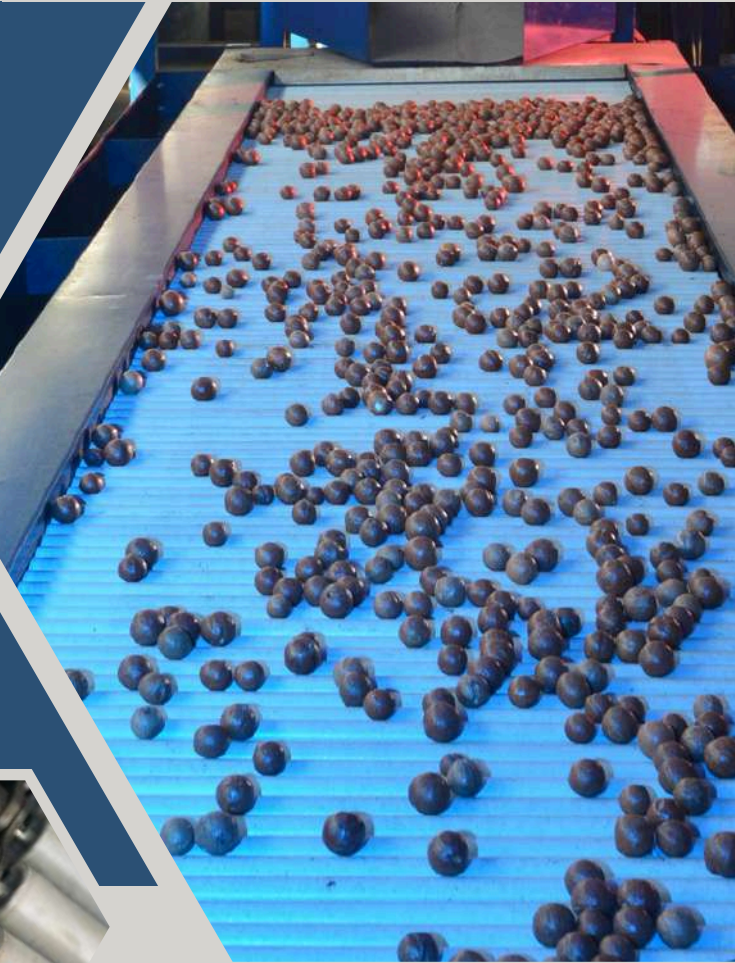
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ROLLER SORTING TABLE

Protea Engineering's Macadamia Roller Sorting Table is an effective and efficient solution for inspecting macadamia nuts. This advanced system significantly lowers labour costs.

Up to 50% Labour Reduction

- 304No. 22mm Rollers, chain driven by a 0.55kw 3 Phase motor for forward motion and achieve rotation via a friction bar.
- Equipped with reject outlets on each side for easy disposal of defective nuts.
- Overhead light frame to enhance visibility
- Dimensions: 4200x1180x1960mm
- 12 Month Warranty



KEY FEATURES

- Improved Inspection Speed: Traditionally, the speed of the husking process was limited by the inspection rate. The Roller Sorting Table addresses these issues, accelerating the process by up to 50%.
- Innovative Roller Assembly: The key to the Roller Sorting Table's efficiency is its roller assembly. Unlike conventional belt systems, the rollers continuously turn as they move along the table. This turning action ensures that nuts are evenly rotated, making it easier to spot defects.
- Focused Inspection Area: Inspectors can focus on a narrow row rather than overseeing the entire table, making the inspection more manageable and efficient.



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TUMBLER

Protea Engineering's Macadamia Tumbler functions by utilising a barrel with CNC cut slots, allowing nuts smaller than 18mm to fall through and be separated as waste. This precise separation process is crucial for maintaining product quality.

Precision Sorting

The Macadamia Tumbler Trommel is an essential component for any macadamia processing line, offering precise sorting to enhance the quality and efficiency of your production



KEY FEATURES

- Tumbler Drum: 566x2000x3mm, laser-pleated with 18mm slots for efficient husk and undersize nut removal.
- Drive System: Direct Drive with a 0.25kw 3 Phase Motor
- Waste Management: Dehusked nuts exit via a drop chute, while husks are collected by baskets or an optional blower system.
- Feed Rates: Capable of processing approximately 4 tons per hour.
- Designed to fit into existing equipment lines; heights can be modified to suit.
- Dimensions: 3141x750x2145mm.
- 12 Month Warranty



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SAMPLE POLE

Protea Engineering's Macadamia Sample Pole is designed to test dried nuts in the drying bin before sending them to the processing plant for final cracking. This simple yet effective tool helps reduce potential costs associated with additional drying and transport.

Quality Assured



KEY FEATURES

- **Lightweight Construction:** Manufactured from aluminum with a machined nylon head, ensuring the pole is light and easy to handle.
- **Dimensions:** 2000mm in length and 63mm in diameter
- **Innovative Design:** Pipe-in-a-pipe mechanism with a 500mm opening for capturing nuts at the bottom of the drying bin.

Simple Operation:

- 1: Push the sample pole into the drying bin with dried nuts.
- 2: Turn the inner pole to capture nuts at the bottom.
- 3: Pull out the sample pole and test the sample nuts on Sample Tray

By using the Macadamia Sample Pole, you can ensure the nuts are properly dried before proceeding to the next stage, thereby optimising the processing efficiency and minimising unnecessary costs.



SAMPLE TRAY

Protea Engineering's Macadamia Sample Tray is the perfect companion to the Sample Pole, designed to ensure optimal quality control before processing.

Quality Assured

The Sample Tray is used to analyse and sort macadamia nuts collected from the drying bin, helping to determine the quality and readiness of the nuts before sending them to the processing crack house. This reduces potential costs in additional drying and transport.



KEY FEATURES

- **Durable Construction:** Manufactured from stainless steel, ensuring longevity and easy cleaning.
- **Perforated Design:** Features 100No. 18mm holes for effective nut sorting.
- **Visual Inspection:** The shallow depth of the tray allows for easy visual inspection and manual sorting of the nuts.
- **Inspect and Sort:** Manually crack the nuts and return them to the tray to evaluate the quality of the entire batch and estimate returns and rejects for the processing plant.
- **Cost Efficiency:** Helps to reduce additional drying and transport costs by ensuring only properly dried nuts are processed.
- **Quality Control:** Provides a reliable method for quality control, ensuring that only the best nuts proceed to the processing stage.
- **Dimensions:** 480mm x 400mm x 2mm
- **Perfectly designed to complement our Sample Pole,** it provides an effective solution for your nut sampling needs.

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