

Pistachio Grading, Roasting & Packing Line

Complete Turnkey Business Proposal



Supplier reference: real food-grade batch nut roaster applicable to pistachio roasting.

200-300 kg/h starter cleaning and grading	50-100 kg/batch roaster loading	2-3 launch grades	5-8 entry operators
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

This snack line cleans and grades Afghan pistachios, separates closed-shell and defective nuts, applies a controlled dry or brine seasoning, roasts by size fraction, cools rapidly and packs. Roast uniformity depends on size, shell opening, initial moisture and recipe.

Why this project fits Afghanistan

- Afghan pistachios can reach retail markets as a local finished snack.
- Size grading improves roast consistency.
- Batch roasting supports multiple recipes with modest capital.
- Separate grades reduce waste and protect premium lots.

Sanaatchi delivery scope

- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

For the lowest credible entry, select a 200-300 kg/h cleaner-grader with inspection table, 50-100 kg/batch roaster, seasoning drum or brine tank, cooling conveyor and semi-automatic pouch packer.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Roasted in-shell pistachios	Buyer-approved size, open-shell rate, roast, salt and moisture	Retail and wholesale snack buyers
Closed-shell or kernel grade	Separately declared and inspected fraction	Kernel processors and ingredient buyers

Closed-shell separation and roasting performance must be demonstrated with Afghan pistachio variety and moisture. Brining adds a complete drying step before roasting.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Air-screen cleaner	Removes light and oversize impurities	200-300 kg/h
2	Pistachio size grader	Creates uniform roasting fractions	Three launch screens
3	Closed-shell separator	Separates density or opening grades	Trialled with Afghan pistachios
4	Inspection conveyor	Rejects stained, insect-damaged and empty nuts	Good lighting
5	Brine tank or seasoning drum	Applies declared salt or flavor	Recipe-controlled dosing
6	Batch nut roaster	Develops flavor and reduces microbial load	50-100 kg/batch
7	Cooling conveyor	Stops roasting and prevents condensation	Filtered ambient air
8	Pouch weigher and sealer	Packs released grades	One or two launch sizes

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Supplier reference: real food-grade batch nut roaster applicable to pistachio roasting.



Supplier reference: real nut weighing and container packing equipment applicable after grading and cooling.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Dry Afghan pistachios
- Food-grade salt and declared seasonings
- Potable water for brined recipes
- Barrier pouches, labels and cartons

Utilities & infrastructure

- Stable three-phase electricity
- Food-grade heat source where required
- Clean compressed air where specified
- Ventilated washable processing room
- Dry allergen-controlled packing and storage

Quality, safety and environmental controls

- Test moisture, infestation, rancidity and foreign matter
- Separate size grades before roasting
- Record seasoning dose, roast time and temperature
- Cool below packing temperature before sealing
- Verify final moisture, microbiology and sensory acceptance
- Control allergens, oxidation and seal integrity

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

Lowest entry uses dry seasoning, one batch roaster and semi-automatic packing. Optical sorting, continuous roasting, nitrogen flushing, building and inventory are excluded.

Component	Indicative range	Notes
Cleaning, grading and inspection	US\$5k-11k	200-300 kg/h dry section
Seasoning and batch roasting	US\$7k-16k	50-100 kg/batch
Cooling and packing	US\$4k-10k	Limited launch formats
Quality and handling tools	US\$2k-5k	Moisture and process control
Freight, installation and spares	US\$4k-9k	Gas or electric heat
Indicative low-entry total	US\$22k-51k	Building, pistachios and working capital excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm raw-nut specification, product grades, capacity and packs
Phase 2	2-4 weeks	Run acceptance trials with representative Afghan nuts
Phase 3	5-9 weeks	Manufacture, inspect and ship the selected equipment
Phase 4	3-5 weeks	Install, train and validate yield, process and shelf life

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

- <https://www.made-in-china.com/showroom/xtpeanutmachinery/product-detailCOKGsyjhccRN/China-Peanut-Coating-Roasting-Flavoring-Production-Line.html>
- <https://machineryking.en.made-in-china.com/product/UvqnBpVlboRh/China-Pine-Nut-Sheller-and-Sorting-Machine-Pine-Nut-Cracking-Machine.html>