



Dried Garlic & Garlic Powder Line

Complete Turnkey Business Proposal



Supplier reference: real continuous fruit and vegetable drying equipment representative of the controlled garlic-dehydration section.

300 kg/h starter fresh-garlic preparation	300-500 kg/batch dryer loading	10-60 mesh launch powder options	7-10 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 line converts Afghan garlic bulbs into dehydrated garlic slices and a controlled portion of low-moisture garlic powder. Bulb breaking, peeling, slicing and surface-water removal must be balanced with dryer evaporation capacity. Powder is milled only from released dry slices so the mill does not cook wet garlic or create an unstable product.

Why this project fits Afghanistan

- Afghan garlic can be preserved beyond harvest and sold at lower transport weight.
- Slices and powder provide two commercial grades from one controlled drying section.
- Safe broken dry slices can supply the powder route without hiding mold or wet defects.
- A batch heat-pump dryer suits a modest seasonal launch better than a large continuous line.

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 300 kg/h fresh-garlic preparation line with bulb breaker, pneumatic peeler, inspection table, washer, slicer, dewaterer, 300-500 kg/batch heat-pump dryer, pin mill, sieve and semi-automatic packer.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Dehydrated garlic slices	Buyer-approved thickness, moisture, color and microbiology	Spice blenders, food processors and wholesalers
Garlic powder	Declared mesh, moisture, pungency and microbiological limits	Retail, restaurants and packaged-food factories

Supplier lines list bulb separation, peeling, washing, slicing, air dewatering, drying, grinding and packing. Dryer sizing must use actual water removal from local garlic; the advertised upstream throughput is not the finished powder output. Wet slices must never enter the mill.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Garlic bulb breaker	Separates bulbs into individual cloves	Low breakage with adjustable feed
2	Pneumatic clove peeler	Removes dry skins without water soaking	Air supply matched to 300 kg/h
3	Inspection conveyor	Rejects damaged, sprouted or moldy cloves	Good lighting and reject chutes
4	Bubble washer and dewaterer	Cleans cloves and removes surface water	Potable final rinse
5	Adjustable garlic slicer	Produces uniform drying thickness	Buyer-confirmed slice setting
6	Heat-pump tray dryer	Reduces moisture under controlled low heat	300-500 kg/batch starter
7	Pin mill and sieve	Produces powder from released dry slices	Low-heat 10-60 mesh options
8	Weigher and pouch sealer	Packs slices and powder	Moisture-barrier formats

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 continuous fruit and vegetable drying equipment representative of the controlled garlic-dehydration section.



Supplier reference: real food-grade milling and collection equipment applicable after garlic slices reach safe final moisture.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Sound traceable Afghan garlic bulbs
- Potable process water
- Moisture-barrier pouches and bulk liners
- Labels and cartons

Utilities & infrastructure

- Stable three-phase electricity
- Potable process water and hygienic drainage
- Food-grade heat source where required
- Ventilated washable processing room
- Clean dry packing and finished-goods storage

Quality, safety and environmental controls

- Reject mold, rot, sprouting and pesticide-noncompliant lots
- Verify peeling damage and slice thickness
- Map dryer temperature, airflow and tray loading
- Release slices by moisture, water activity and microbiology
- Control dust, heat and metal during milling
- Validate pungency, caking and shelf life in the final pack

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 one batch dryer and semi-manual packing; it sells slices first and mills only released dry offcuts. Continuous belt drying, sterilization, automatic retail packing, building and garlic inventory are excluded.

Component	Indicative range	Notes
Bulb breaking, peeling and inspection	US\$6k-14k	300 kg/h preparation
Washing, slicing and dewatering	US\$5k-11k	Potable-water section
Heat-pump dryer and trays	US\$10k-24k	300-500 kg/batch
Milling, sieving and packing	US\$5k-12k	Slices plus one powder format
Freight, installation and spares	US\$5k-11k	Confirm chamber and compressor load
Indicative low-entry total	US\$31k-72k	Building, garlic and working capital excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm raw material, product, capacity and pack specifications
Phase 2	2-4 weeks	Run supplier trials with representative Afghan material
Phase 3	6-10 weeks	Manufacture, inspect and ship the selected equipment
Phase 4	3-5 weeks	Install, train, validate the process and start shelf-life checks

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

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