

Bulgur Wheat Production Line

Complete Turnkey Business Proposal

BAŞAY

BLT1
Başay Organik Bulgur Tesisi



Specialist supplier reference: compact bulgur peeling, transfer, crushing and sifting arrangement.

300-500 kg/h starter cleaned-wheat input	~10% post-drying moisture reference	35-70 kW indicative electrical load	6-9 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 cleaned whole wheat into shelf-stable bulgur through hydrothermal cooking, controlled drying, peeling, cracking and grading. It is a distinct food process rather than ordinary flour milling. The entry plan uses batch cooking and a small controlled dryer so production does not depend entirely on weather, while retaining semi-manual handling and packing to limit capital.

Why this project fits Afghanistan

- Afghan wheat can be converted into a higher-value shelf-stable staple food.
- Coarse and fine bulgur grades serve households, restaurants and institutional kitchens.
- Batch cooking and semi-manual packing keep the entry plant manageable for a small operator.
- Local fuel and labor advantages can support drying and handling when food safety is controlled.

Sanaatchi delivery scope

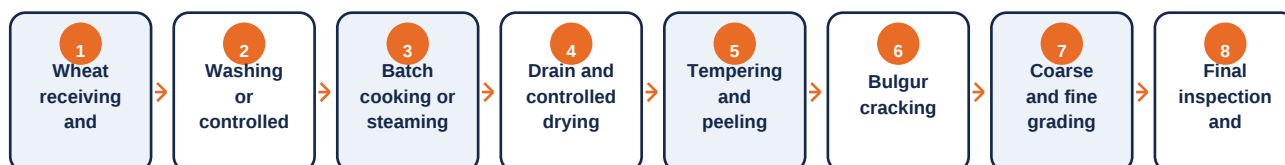
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning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

Recommended configuration

Start at 300-500 kg/h with compact cleaning, a batch cooking vessel, a cabinet or small tunnel dryer, peeler, bulgur crusher-sifter and semi-manual packing. Confirm wheat variety, cooking endpoint, dryer capacity and coarse/fine grade mix through trials.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Coarse bulgur	Buyer-approved large grain fraction	Pilaf, restaurants and household retail
Medium bulgur	Uniform mid-size fraction	General retail and institutional food
Fine bulgur	Small graded fraction with controlled fines	Traditional dishes and food service

Specialist supplier references describe cleaning, cooking, drying to about 10% moisture, peeling, stone or roller cracking and size classification. One compact reference lists 400-600 kg/h, 380 V and about 35 kW for the post-cooking bulgur equipment; the cooking heat source and dryer must be sized separately from actual moisture removal.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Wheat cleaner and destoner	Removes dust, chaff, stones and foreign grain	Food-grade 300-500 kg/h entry scope
2	Washer or soaking tank	Cleans and hydrates wheat before cooking	Potable-water contact and controlled drain
3	Batch cooking vessel	Cooks kernels uniformly to the approved endpoint	Steam-jacketed or direct-steam food-grade vessel
4	Drain conveyor and buffer	Removes free water and balances dryer feed	Cleanable stainless contact surfaces
5	Cabinet or small tunnel dryer	Reduces cooked-wheat moisture for safe cracking and storage	Controlled air near 60-65 C subject to trials
6	Tempering and peeling unit	Conditions and removes the loosened outer layer	Adjust to minimize kernel breakage
7	Bulgur crusher and sifter	Cracks dried wheat and separates size grades	Interchangeable screens for coarse, medium and fine
8	Final aspirator and inspection table	Removes light husk and permits visual control	Food-safe dust collection
9	Scale and bag sealer	Packs graded bulgur with lot coding	Semi-manual retail and 25 kg bags

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



Specialist supplier reference: compact bulgur peeling, transfer, crushing and sifting arrangement.



Specialist supplier reference: bulgur crushing and size-classification machine.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Food-grade Afghan wheat with suitable hardness and sound kernels
- Potable process water
- Food-grade retail or wholesale bags
- Labels and coding consumables
- Approved cleaning and sanitation materials

Utilities & infrastructure

- Stable three-phase electricity
- Potable process and cleaning water with drainage
- Steam, gas, diesel or other approved cooking and drying heat source
- Ventilation and humid-air exhaust
- Dry wheat and finished-bulgur storage
- Food-hygiene, pest-control and fire-protection systems

Quality, safety and environmental controls

- Approve wheat variety, moisture, infestation and foreign-matter limits
- Control soaking or washing water quality and time
- Validate cooking endpoint for every wheat grade
- Record dryer temperature, time and final moisture
- Check peeling loss, cracked-size distribution and fines
- Verify cooling before packing to prevent condensation
- Apply lot coding, retention samples and finished-product microbiological plan

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 credible entry uses batch cooking, a small controlled dryer, a compact peeling/cracking set and semi-manual packing. Weather-only sun drying is not used as the sole commercial control.

Component	Indicative range	Notes
Cleaning and washing section	US\$5k-12k	Compact cleaner, destoner and food-grade wash tank
Batch cooker and heat interface	US\$7k-18k	Lowest-capacity food-grade cooking package
Controlled dryer	US\$8k-22k	Cabinet or small tunnel sized by moisture load
Peeling, cracking, grading and packing	US\$7k-18k	Semi-manual starter grade range
Electrical, installation and initial spares	US\$4k-10k	Local platforms and piping where safe
Freight and clearance	US\$5k-12k	Final cost follows cooker and dryer volume
Indicative low-entry total	US\$36k-92k	Building, boiler house and wheat stock excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm bulgur grades, wheat samples, heat source and pack sizes
Phase 2	3-5 weeks	Run cooking and drying trials and freeze the process design
Phase 3	6-10 weeks	Manufacture, inspect and ship the selected line
Phase 4	3-5 weeks	Install, commission, train and approve shelf-life batches

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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