

Semolina Production Line

Complete Turnkey Business Proposal



Supplier reference: installed multi-level roller-milling and sifting equipment for semolina-capable wheat processing.

10-20 t/day lowest credible capacity	60-72% planning semolina and flour yield	45-85 kW indicative connected load	6-10 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 separates the coarse, clean endosperm of hard or durum-type wheat as semolina instead of grinding all product into fine bakery flour. The project depends on wheat hardness, vitreous-kernel content, moisture and buyer granulation targets; an ordinary small flour mill without purifiers and controlled roll passages cannot reliably make premium pasta semolina.

Why this project fits Afghanistan

- Afghan hard wheat can be upgraded into a higher-value ingredient for pasta, noodles, couscous-style foods and selected confectionery.
- Domestic semolina supply reduces dependence on imported pasta-milling ingredients.
- The same plant can recover lower-grade flour and bran as saleable co-products.
- A compact modular mill can add more roller and purification capacity after stable contracts are secured.

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 10-20 t/day line with cleaning, destoning, controlled dampening, roller milling, planned sifting, a semolina purifier and semi-manual packing. Test representative Afghan hard wheat and approve semolina granulation, ash, specks and pasta performance before purchase.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Coarse semolina	Buyer-approved granulation, color and low bran specks	Pasta, couscous-style foods and retail packs
Fine semolina	Controlled medium-fine fraction	Noodles, desserts and food-service users
Secondary flour and bran	Separated and traceable milling co-products	Bakeries and livestock-feed users

Supplier references show complete semolina-capable wheat mills with cleaning, dampening, roller milling, plansifting and purification. Published large-line figures are not suitable entry-price evidence; Sanaatchi's entry concept scales the essential process to 10-20 t/day and requires a supplier milling diagram based on the buyer's wheat and product specification.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Intake cleaner and aspiration	Removes dust, chaff and over/undersize impurities	Screens selected for local wheat
2	Destoner and magnet	Protects rolls and controls dense and ferrous contamination	Accessible adjustment and inspection points
3	Dampening and tempering bins	Conditions bran and endosperm before milling	Sized for wheat hardness and residence time
4	Roller-mill passages	Opens kernels progressively without excessive flouring	Fluted break rolls plus reduction passages
5	Plansifter	Classifies semolina, middlings, flour and bran	Buyer-approved screen plan
6	Semolina purifier	Uses controlled air and sieving to remove bran specks	Essential for premium semolina quality
7	Product bins and blender	Keeps fractions separate and forms approved grades	Food-grade, dust-tight construction
8	Scale and bag closer	Packs semolina and co-products	Semi-manual 1-50 kg starter scope

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: installed multi-level roller-milling and sifting equipment for semolina-capable wheat processing.



Supplier reference: operating wheat mill showing the roller and plansifter structure used for graded flour and semolina fractions.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Afghan hard wheat or durum-type wheat approved by milling trial
- Food-grade retail and wholesale bags
- Labels, sewing thread or heat-seal film
- Approved sanitation and pest-control materials

Utilities & infrastructure

- Stable three-phase electricity
- Potable water for measured dampening and sanitation
- Dust extraction and safe ventilation
- Dry wheat, tempering and finished-product storage
- Laboratory sieves, moisture meter, ash testing access and calibrated scales

Quality, safety and environmental controls

- Grade incoming wheat for moisture, hardness, vitreous kernels, infestation and foreign matter
- Record dampening water and tempering time for every wheat lot
- Monitor roll gaps, purifier air and screen condition
- Test semolina granulation, ash, color, bran specks and moisture
- Approve cooking or pasta performance with target buyers
- Control combustible flour dust and guard all drives

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 is a compact 10-20 t/day semolina mill with only the essential cleaning, conditioning, roller, sifting, purification and semi-manual packing stages. Land, building and wheat working capital are excluded.

Component	Indicative range	Notes
Cleaning, destoning and wheat conditioning	US\$8k-18k	Compact section sized for one milling stream
Roller milling, plansifting and purification	US\$22k-48k	Essential semolina passages, not a single grinder
Bins, dust control and semi-manual packing	US\$6k-15k	Launch with limited product grades
Electrical, installation and initial spares	US\$5k-12k	Local noncritical supports where safely engineered
Freight and clearance	US\$6k-14k	Confirm container count and mill structure
Indicative low-entry total	US\$47k-107k	Building, wheat stock and laboratory fees excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm wheat quality, semolina grades, capacity and bag sizes
Phase 2	3-5 weeks	Run supplier milling trials and approve the flow diagram
Phase 3	7-12 weeks	Manufacture, inspect and ship the selected line
Phase 4	3-5 weeks	Install, balance the mill, train staff and approve product lots

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://sjzafricachina.en.made-in-china.com/product/jpeUWEJGmQcA/China-Addis-Ababa-Branch-Office-Fully-Automatic-42tpd-Wheat-Mill-for-Atta-Semolina.html>
- <https://sjzafricachina.en.made-in-china.com/product/WoEniphPVVcJ/China-200t-24h-Wheat-Flour-Milling-Machine-to-Make-Pasta-Semolina-Flour.html>