

Mini Maize-Flour Production Line

Complete Turnkey Business Proposal



Supplier reference: compact maize peeling and milling machine for small-workshop output.

200-400 kg/h starter throughput	15-30 kW indicative connected load	3-5 entry operators	1-25 kg starter pack range
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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 compact line converts dry food-grade maize into sifted flour for household cooking, bakeries and institutional kitchens. A food line needs more than a universal grinder: cleaning, controlled dehulling or degerming, separation of bran and germ, consistent milling, dust control and hygienic packing determine shelf life, taste and product acceptance.

Why this project fits Afghanistan

- Afghan maize can be processed near farming areas into a stable retail staple
- Small capacity limits inventory and allows gradual market development
- Separated bran and germ can be sold to approved feed or oil users
- Interchangeable screens support fine flour and coarser meal grades

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 200-400 kg/h with a simple cleaner, maize dehuller/degerminator, mill, sifter, dust collection and semi-manual packing. Approve local maize moisture, hardness, flour color, taste and granulation before selecting screens and motor size.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Fine maize flour	Buyer-approved color, moisture and particle size	Households, bakeries and institutions
Coarse maize meal	Controlled coarse fraction	Traditional foods and food service
Bran and germ fraction	Clean separated co-product	Approved feed and oil users

Compact supplier machines commonly quote 200-400 kg/h and about 7.5 kW for one milling unit. The project scope adds the cleaner, dehulling or degerming step, sifter, dust collection, product handling and packing required for a complete food-grade line.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Maize cleaner and magnet	Removes dust, stalk, stones and ferrous material	Food-grade screens for local maize
2	Dehuller and degerminator	Removes pericarp and germ before fine milling	Adjustable pressure with low endosperm loss
3	Compact maize mill	Grinds prepared endosperm into flour	200-400 kg/h starter reference
4	Vibration sifter	Controls flour granulation and returns oversize	Interchangeable screens for two launch grades
5	Cyclone and dust collector	Transfers product and controls airborne dust	Include blower, ducts and safe discharge
6	Small flour blender	Equalizes successive batches	Food-grade contact surfaces
7	Scale and bag sealer	Packs flour and meal	Semi-manual 1-25 kg range

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: compact maize peeling and milling machine for small-workshop output.



Supplier reference: real compact maize mill shown with food-grain application and supplier identification.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Dry food-grade Afghan maize
- Retail pouches or lined wholesale bags
- Labels and coding consumables
- Approved cleaning and sanitation materials

Utilities & infrastructure

- Stable three-phase electricity
- Dust extraction and safe ventilation
- Dry raw-maize and finished-flour storage
- Potable water only for measured conditioning and sanitation
- Pest-control and food-hygiene program

Quality, safety and environmental controls

- Inspect maize moisture, mold, insects and mycotoxin risk
- Record cleaner, magnet and dehuller checks
- Control flour moisture, color, odor and particle-size distribution
- Verify bran and germ separation without excessive edible loss
- Approve cooking performance and shelf life
- Control combustible grain dust and machine guarding

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 compact 200-400 kg/h maize-preparation and milling stream, basic dust control and semi-manual packing. Land, building and maize working capital are excluded.

Component	Indicative range	Notes
Cleaning and maize preparation	US\$3k-7k	Cleaner, magnet and compact dehuller
Milling, sifting and dust collection	US\$4k-10k	One compact milling stream
Blending and semi-manual packing	US\$2k-6k	Limit launch packs to proven demand
Electrical, installation and initial spares	US\$2k-5k	Local supports and connections where safe
Freight and clearance	US\$2k-6k	Consolidate compact machines
Indicative low-entry total	US\$13k-34k	Building, maize stock and laboratory tests excluded

Implementation sequence

Phase 1	1-2 weeks	Confirm flour grades, maize samples, pack sizes and target capacity
Phase 2	2-3 weeks	Run supplier milling trials and approve complete equipment scope
Phase 3	4-7 weeks	Manufacture, inspect and ship the selected line
Phase 4	2-3 weeks	Install, train, trial mill and approve saleable 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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