

Integrated Grain-Silo & Milling Complex

Complete Turnkey Business Proposal



Made-in-China supplier reference: real integrated grain-silo & milling complex equipment.

bankable study investment gate	confirmed feedstock supply gate	EPC scope delivery gate	quality laboratory release gate
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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

Strategic grain infrastructure that receives, samples, cleans and dries wheat/maize/rice, stores it in engineered silos, conditions and mills confirmed grain products, packs output and manages quality, pests, dust and dispatch.

Why this project fits Afghanistan

- This is a strategic plant, not a low-entry equipment package.
- Bankable feedstock, utility, permit, market, EPC and financing evidence is required before selection.
- Operate only with an independent laboratory, defined quality release and preventive-maintenance program.

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

Proceed only after grain procurement and seasonal volume, silo capacity, milling product mix, food safety, water/power, rail/road logistics, off-take and experienced grain-engineering support are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Stored grain, flour and milling by-products	Grain type, storage tonnes, moisture, cleaning grade, flour extraction, ash/protein targets, pack size, pest control and food-safety standard	Flour distributors, bakeries, food processors, humanitarian supply, livestock feed users and regional grain traders

Final capacity, process, resource quality, utilities, permit conditions, emissions, acceptance test and commercial terms require independent engineering review before any order.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Receiving/weighing/sampling	Accepts qualified grain	Moisture and contaminants
2	Cleaning/drying and conveying	Prepares stable storage	Impurities and moisture
3	Silo storage/aeration system	Protects grain inventory	Temperature and pest control
4	Conditioning/milling/packing	Produces flour products	Extraction and quality
5	Laboratory/dust/fire controls	Releases safe output	Food safety and safety

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



Made-in-China supplier reference: real integrated grain-silo & milling complex equipment.



Made-in-China supplier reference: second real machine configuration for integrated grain-silo & milling complex.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Wheat/maize/rice, bags, additives where approved, spare screens/rolls, cleaning media, packaging, pest-control materials, laboratory consumables and utilities

Utilities & infrastructure

- Bankable electricity/fuel/water plans, process cooling and treatment, plant fire safety, laboratory, covered stores and qualified operation team
- Environmental permits, emissions control, waste route, maintenance workshop, critical spares and site-specific safety systems

Quality, safety and environmental controls

- Confirm grain origins/seasonality, storage tonnage, drying need, food safety, flour demand, logistics, dust/fire design and working capital before EPC contracting
- Control intake grade, moisture, cleaning, silo temperature/aeration, conditioning, milling extraction, ash/protein, pack weight and dispatch
- Test grain moisture/contaminants, flour moisture/ash/protein where specified, extraction, weights, food-safety records, silo condition and pest controls

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

The silo-mill complex must be designed around local harvest flow, storage losses, food-safety control and confirmed flour customers - not only a silo capacity figure.

Component	Indicative range	Notes
Receiving, cleaning, drying and silos	US\$45m-150m	Tonnes and logistics
Milling, packing and by-product handling	US\$20m-75m	Grain/product mix
Laboratory, dust/fire, utilities and installation	US\$15m-50m	Food/safety critical
Indicative strategic project total	US\$80m-275m	Grain inventory, land and finance excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

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

- compact-roller-wheat-flour-mill
- cereal-production-line