



100-300 TPD Wheat Flour Mill

Complete Turnkey Business Proposal



Made-in-China supplier reference: real 100-300 tpd wheat flour mill equipment.

100-300 t/day commercial capacity range	100 t/day phased entry basis	1 flour portfolio controlled launch	35-70 three-shift workforce
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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

A large commercial flour mill converting cleaned Afghan or imported wheat into one defined flour portfolio through intake and silo storage, sampling, pre-cleaning, screening, aspiration, magnetic separation, destoning, dampening and tempering, roller milling, plansifting, purification, flour blending or fortification where permitted, finished-flour silos, bagging, bran dispatch and laboratory release. It is not a single roller mill or a guaranteed extraction percentage independent of wheat quality.

Why this project fits Afghanistan

- Flour is a high-volume staple with clear local demand and by-product value.
- Cleaning and wheat classification protect quality and milling equipment.
- Extraction, ash and protein targets depend on real wheat, not a catalogue claim.
- Dust control, food safety, fortification compliance and laboratory release are essential.

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

Begin feasibility at 100 t/day and expand only after wheat supply, flour demand and bran route are proven. Specify intake silos, complete cleaning and tempering, roller mill and sifter sections, flour bins, one bag size family, dust collection, mill laboratory, fortification controls where legally required, backup power and a fire/explosion-dust design. Confirm extraction and flour specification with representative Afghan wheat trials.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Wheat flour and separated bran	Declared extraction basis, moisture, ash, protein, gluten or rheology where required, falling number, granulation, microbiology, fortification level and bag mass	Afghan bakeries, retailers, institutions and animal-feed buyers for bran

The supplier must run a representative-wheat trial and quote throughput on a defined wheat moisture, test weight, dockage and quality window. Acceptance records cleaning loss, tempering, power, extraction, flour ash/moisture/protein, granulation, falling number, dough tests where relevant, fortification, bag mass, metal detection, dust performance and traceability. Maintain flour/bran segregation and pest control.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Intake, silo and sampling system	Receives traceable wheat and maintains blending control	100 t/day phase basis
2	Cleaning, aspiration and tempering section	Removes impurities and conditions wheat	Representative-wheat guarantee
3	Roller mills, plansifters and purifiers	Separates controlled flour and bran streams	One flour portfolio
4	Flour bins, microdosing and bagging line	Blends, fortifies if permitted and packs released flour	One bag family
5	Mill laboratory, dust system and bran dispatch	Protects food safety and confirms saleable output	Fire/explosion-dust design

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 100-300 tpd wheat flour mill equipment.



Made-in-China supplier reference: second real machine configuration for 100-300 tpd wheat flour mill.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Classed Afghan or imported wheat with moisture, protein and contamination limits
- Approved fortificant premix only where legally required
- Food-grade bags, labels, sewing thread and pallets

Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Guarded machinery, lockout, ventilation and fire protection
- Covered segregated raw-material and finished-goods storage
- Maintenance tools, safe lifting and critical spare parts
- Grain intake and finished-flour silos, pest-control program and food-grade hygiene zones
- Dust aspiration, explosion relief/isolation and fire protection
- Laboratory, reliable power, backup generation and bag warehouse

Quality, safety and environmental controls

- Test incoming wheat moisture, test weight, dockage, protein and mycotoxin risk
- Record cleaning loss, tempering time and milling balance
- Test flour moisture, ash, protein, granulation and falling number
- Verify dough/rheology and fortification where specified
- Check bag mass, seals, code, metal control and storage hygiene
- Track bran yield, flour yield and lot traceability

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 lowest credible commercial phase is a 100 t/day mill with complete cleaning, tempering, laboratory and dust safety. A 300 t/day configuration follows proven wheat supply and market demand.

Component	Indicative range	Notes
Intake, silos, cleaning and tempering	US\$1.2m-3.2m	100 t/day phase basis
Roller mills, sifters, bins and bagging	US\$2.1m-5.8m	One flour portfolio
Dust/fire, laboratory and utility systems	US\$0.8m-2.2m	Food and grain-safety scope
Civil, installation, freight and commissioning	US\$1.1m-3m	Wheat trial required
Indicative 100 t/day project total	US\$5.2m-14.2m	Land and wheat stock 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

- <https://hncijx.en.made-in-china.com/product/hvNmSnHECorO/China-100tpd-Wheat-Flour-Mill-Production-Line.html>
- <https://sjzafricachina.en.made-in-china.com/product/DFLfHpjcHATq/China-100tpd-Industrial-Wheat-Flour-Milling-Machine-Complete-Plant-Turnkey-Project.html>