



Ceramic Tile Factory

Complete Turnkey Business Proposal



Made-in-China supplier reference: real ceramic tile factory equipment.

1 tile family controlled launch	20-50k m2/day strategic screen	roller kiln firing core	120-220 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 strategic ceramic tile factory turning qualified clay, feldspar, silica, pigments and glazes into one tile family through crushing, body milling, spray drying, pressing, drying, glazing or digital decoration, roller-kiln firing, sorting, rectification where specified and packing.

Why this project fits Afghanistan

- Local minerals can support tile body after full mineral testing.
- Firing profile, glaze fit and dimensional sorting decide saleable quality.
- Kiln energy and emissions require bankable utility engineering.

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 with one wall or floor tile size and finish after validating mineral body, gas/electric kiln energy, water, glaze chemistry, rejected-tile recovery, laboratory and dealer contracts.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Ceramic wall or floor tiles	Size, thickness, water absorption, flatness, shade, glaze adhesion and breaking strength	Afghan construction distributors, projects and retailers

Selection requires a site-specific feasibility study, representative material trials and documented acceptance testing for this exact line.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Crushing, ball mill and spray dryer	Prepares ceramic body	Qualified clay/mineral mix
2	Press and dryer	Forms green tiles	One size family
3	Glaze line and roller kiln	Decorates and fires tile	Validated firing curve
4	Sorting, packing and lab	Separates compliant tiles	Shade/flatness/strength

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 ceramic tile factory equipment.



Made-in-China supplier reference: second real machine configuration for ceramic tile factory.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Tested clay, feldspar, silica, pigments, glaze and packaging cartons
- Roller consumables, kiln furniture and approved additives

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
- Natural gas/electric kiln energy, treated water, compressed air and dust collection
- Glaze-waste recovery, kiln-emissions control and guarded hot-zone logistics

Quality, safety and environmental controls

- Test body moisture and particle size
- Record press pressure, dryer moisture and firing curve
- Check dimensions, flatness, water absorption, shade, glaze defects and break strength

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

A responsible entry is a single high-demand tile family; a full design range, porcelain slabs and digital-print variety must follow proven kiln and market performance.

Component	Indicative range	Notes
Body preparation, pressing and drying	US\$4m-10m	One tile family
Glaze, kiln, sorting and packing	US\$6m-16m	Firing and finishing core
Utilities, environmental controls and installation	US\$4m-10m	Energy-intensive plant
Indicative strategic project total	US\$14m-36m	Land, quarry and working capital 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://www.alibaba.com/showroom/ceramic-tile-production-line.html>
- https://www.made-in-china.com/products-search/hot-china-products/Ceramic_Tile_Production_Line.html