

Calcium-Silicate Boards Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real calcium-silicate boards line equipment.

approved sample market gate	defined product launch scope	performance test release gate	batch records traceability
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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

Produces non-combustible calcium-silicate insulation and building boards from silica, lime, reinforcing fibre and water by slurry preparation, sheet forming, pressing, autoclave curing, drying, cutting, edge finishing, testing and packing.

Why this project fits Afghanistan

- Confirm the intended application, applicable standard and buyer acceptance test.
- Use a defined product family and documented formula/tooling at launch.
- Keep material, curing/firing and release records for every lot.

Sanaatchi delivery scope

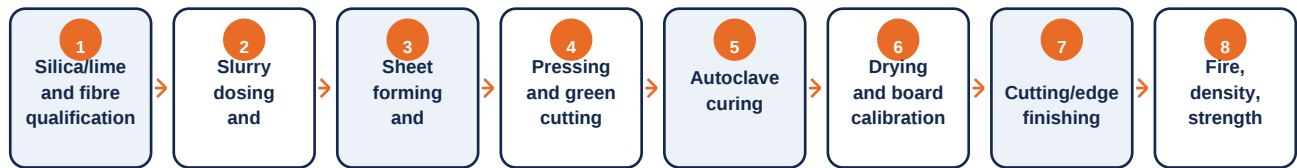
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

This is a large strategic autoclaved-board project. Complete feedstock, fibre route, pressure-vessel, energy, water, dust, market and certification feasibility before selecting equipment; an ordinary cement-board line cannot substitute for calcium-silicate chemistry and hydrothermal curing.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Calcium-silicate boards	Density, thickness, flexural strength, moisture, thermal conductivity, fire classification, dimensional stability and edge finish	Fireproofing contractors, ceilings/partitions, industrial insulation, warehouses and commercial construction

Supplier scope, feedstock suitability, utilities, installation and acceptance criteria must be confirmed before purchase.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Raw-material silos and slurry system	Controls silica/lime/fibre formula	Qualified chemistry and water ratio
2	Sheet-forming and press line	Builds uniform green boards	Board density/thickness target
3	Autoclave system	Hydrothermally cures calcium silicate	Pressure/temperature cycle
4	Drying/calibration/cutting line	Produces saleable board formats	Moisture/edge tolerance
5	Fire and board laboratory	Releases certified product	Target standard test plan

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 calcium-silicate boards line equipment.



Made-in-China supplier reference: second real machine configuration for calcium-silicate boards line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified silica, lime, reinforcing fibre, process water, approved additives, packaging, cutting consumables and autoclave seals/spares

Utilities & infrastructure

- Industrial electricity, covered storage and protected finished-board handling
- Guarded machinery, maintenance plan, essential spares and material-specific dust/heat/chemical controls

Quality, safety and environmental controls

- Validate local silica chemistry and fibre compatibility before design freeze
- Control slurry density, board weight, press/dewatering and autoclave cycle
- Test density, strength, moisture, thermal conductivity, dimensional stability and declared fire classification

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

Calcium-silicate board needs a bankable utility, autoclave and certification plan; a published cost range is only early scoping until feedstock and off-take are confirmed.

Component	Indicative range	Notes
Slurry, forming and press system	US\$1.2m-3.5m	Industrial board route
Autoclaves, drying and finishing	US\$1.8m-5.5m	Pressure/energy intensive scope
Utilities, laboratory, EPC and commissioning	US\$1.0m-3.5m	Bankable-feasibility project
Indicative strategic total	US\$4m-12.5m	Land/building/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/calcium-silicate-board-production-line.html>
- https://www.made-in-china.com/products-search/hot-china-products/Calcium_Silicate_Board_Machine.html