

Fibreglass Thermal-Insulation Factory

Complete Turnkey Business Proposal



Made-in-China supplier reference: real fibreglass thermal-insulation factory 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 fibreglass-insulation manufacturing that melts mineral batch, fibres it, applies binder, forms a blanket, cures, cuts, faces, packs and tests thermal, density and fire properties.

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 with verified mineral chemistry, dependable high-temperature energy, binder supply, environmental permits, fire-performance standards, construction demand, fibre safety controls and an experienced insulation EPC/operations partner.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Fibreglass thermal insulation	Declared density, thickness, thermal conductivity, facing, compression recovery, fire/smoke class, dimensions and packing	Buildings, HVAC, ducts, industrial equipment, cold stores, roofing and energy-efficiency projects

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

Core Equipment Schedule

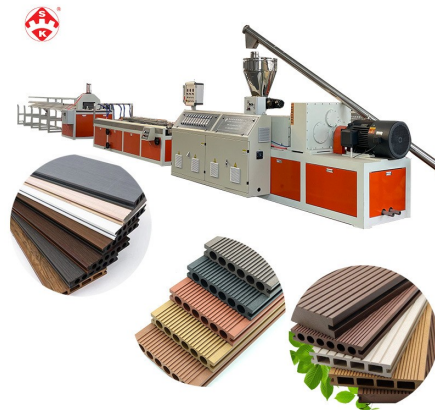
Step	Equipment	Function	Indicative parameter
1	Batch/melting furnace	Melts controlled mineral glass	Chemistry and fuel
2	Fibreisation/binder system	Creates coated glass fibres	Fibre and binder quality
3	Blanket forming and curing oven	Sets insulation structure	Density and cure
4	Cutting/facing/packing	Creates sellable rolls or boards	Thickness and compression
5	Thermal/fire laboratory and emission control	Releases compliant product	Performance 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 fibreglass thermal-insulation factory equipment.



Made-in-China supplier reference: second real machine configuration for fibreglass thermal-insulation factory.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Verified silica/mineral batch, cullet where engineered, binder chemicals, facing materials, packaging, furnace refractories, fuel, filters, laboratory consumables and spares

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 mineral chemistry, energy, binder, environmental permits, product standards, fire requirements and off-take before contracting
- Control melt chemistry, fibre diameter, binder rate, blanket density, oven cure, thickness, facing, dust, thermal conductivity and fire/smoke performance
- Use accredited testing for density, thickness, thermal conductivity, compression, moisture, facing bond and named fire/smoke standard

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

Fibreglass insulation requires continuous melt control and serious fibre, binder and emission management. Low price claims without these systems are not credible.

Component	Indicative range	Notes
Batch, furnace, fibreisation and binder system	US\$55m-170m	Capacity and fuel dependent
Forming, curing, cutting and packing	US\$25m-85m	Roll/board product mix
Emissions, laboratory, utilities and installation	US\$20m-75m	Compliance-critical
Indicative strategic project total	US\$100m-330m	Land, finance 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

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