



Float-Glass Manufacturing Plant

Complete Turnkey Business Proposal



Made-in-China supplier reference: real float-glass manufacturing plant 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 float-glass manufacturing that melts qualified silica sand, soda ash, limestone and cullet in a continuous furnace, forms ribbon glass on molten tin, anneals, cuts, inspects and dispatches architectural flat glass.

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 an independent study proves suitable silica chemistry, long-term fuel/power, water, cullet, furnace rebuilding strategy, domestic and export off-take, emissions permits, logistics and experienced float-glass EPC/operating partner.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Architectural float glass	Confirmed thickness, width, optical quality, flatness, colour, defect limits, cut size, packing and standard	Architectural glazing, processors, fabricators, construction projects and regional flat-glass distributors

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-house and raw-material system	Controls glass chemistry	Silica and recipe quality
2	Continuous melting furnace	Melts refined batch	Fuel, pull rate and emissions
3	Tin bath and annealing lehr	Forms and relieves glass ribbon	Flatness and stress
4	Cutting/inspection/packing	Releases saleable sheets	Optical and dimensional quality
5	Glass laboratory and emission systems	Controls process and compliance	Chemistry and defects

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 float-glass manufacturing plant equipment.



Made-in-China supplier reference: second real machine configuration for float-glass manufacturing plant.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified low-iron silica, soda ash, limestone/dolomite, refining agents, cullet, furnace refractories, fuel, packaging and laboratory consumables

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

- Verify raw-material reserves and chemistry, energy contract, water, emissions, market and experienced partner before commitment
- Control batch chemistry, furnace temperature, tin bath atmosphere, ribbon thickness, anneal stress, optical defects, cut accuracy and packing
- Use laboratory and online inspection for optical quality, thickness, stress, defects, chemistry and emission performance

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

Float glass is a continuous furnace business: reliable fuel, raw-material chemistry, refractories, quality control and market scale matter more than a catalogue line price.

Component	Indicative range	Notes
Batch house, furnace and tin-bath system	US\$180m-550m	Capacity and fuel dependent
Lehr, cutting, inspection and packing	US\$45m-160m	Width and automation scope
Utilities, emissions, laboratory and installation	US\$70m-230m	Compliance-critical
Indicative strategic project total	US\$295m-940m	Mine, 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

- <https://www.alibaba.com/showroom/glass-manufacturing-line.html>
- https://www.made-in-china.com/products-search/hot-china-products/Glass_Production_Line.html