



Architectural Glass Tempering Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real architectural glass tempering line equipment.

approved sample market gate	defined range 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 thermally tempered architectural glass by cut-edge inspection, washing, controlled furnace heating, rapid quench, fragmentation/flatness inspection, optional heat-soak testing, marking and protected packing.

Why this project fits Afghanistan

- Confirm an installed sample and applicable performance standard.
- Launch with a defined product family and documented process settings.
- Keep material and release records for each batch.

Sanaatchi delivery scope

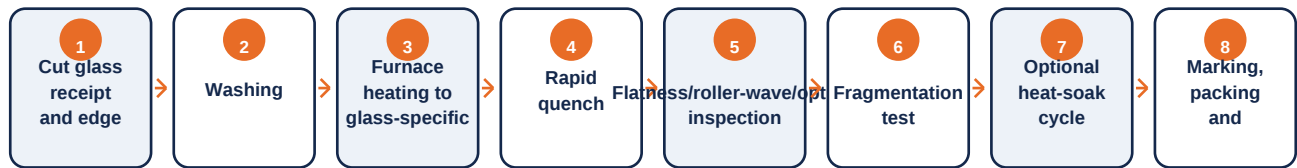
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning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

Recommended configuration

Treat this as a glass-safety process. Select furnace size only after confirmed glass mix and buyer volume; validate edge quality, heating recipe, quench, anisotropy/flatness, fragmentation and local handling against the declared safety standard.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Architectural tempered glass	Glass thickness, dimensions, flatness, roller wave, optical distortion, edge finish, fragmentation, stress pattern and safety marking	Windows, doors, façades, partitions, showers, furniture and building contractors

Supplier scope, glass compatibility, site utilities and acceptance criteria must be confirmed before purchase.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Glass washer	Prepares clean glass	No surface contamination
2	Tempering furnace	Heats glass uniformly	Thickness/recipe control
3	Quench section	Creates tempered stress profile	Air pressure/balance
4	Fragmentation/optical QC	Verifies safe break pattern and appearance	Standard test grid
5	Glass handling/packing system	Protects released sheets	A-frame and separator system

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 architectural glass tempering line equipment.



Made-in-China supplier reference: second real machine configuration for architectural glass tempering line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified cut flat glass, ceramic marking ink where used, washer consumables, handling pads, separators, protective wrap and critical furnace/quench spares

Utilities & infrastructure

- Stable industrial power, clean covered glass storage and protected handling routes
- Guarded machinery, glass-breakage procedures, PPE, maintenance plan and critical spares

Quality, safety and environmental controls

- Inspect cut edges before furnace loading; poor edge quality causes breakage
- Control furnace temperature, conveyor speed and quench balance by thickness
- Test fragmentation, flatness, roller wave and optical quality to applicable safety 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

Tempered glass is a safety product: furnace output must be proven through fragmentation and optical testing, not judged only by throughput.

Component	Indicative range	Notes
Tempering furnace and quench	US\$180k-650k	Medium architectural glass line
Washing, handling, test and packing	US\$70k-250k	Safe glass logistics scope
Electrical, installation and spares	US\$60k-220k	Glass-specific commissioning
Indicative total	US\$310k-1.12m	Building and glass 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://www.alibaba.com/showroom/glass-processing-machine.html>
- https://www.made-in-china.com/products-search/hot-china-products/Glass_Processing_Machine.html