

Thermal-Break Aluminium Windows Workshop

Complete Turnkey Business Proposal



Made-in-China supplier reference: real thermal-break aluminium windows workshop 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

Fabricates thermally broken aluminium windows from purchased polyamide-strip profiles, compatible hardware and glazing through precision cutting, dedicated machining, frame/sash assembly, hardware fitting, glazing, thermal-break protection, squareness/operation checks and installation-ready packing.

Why this project fits Afghanistan

- Approve an installed sample and buyer acceptance criteria.
- Launch with a defined product family and documented tool settings.
- Keep material and quality records for every 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

Do not buy a thermal-break profile mill unless confirmed volume justifies it. For the practical entry workshop, source certified thermal-break profiles and fabricate them with compatible precision tools; confirm thermal performance, drainage, gaskets, hardware and glazing on installed samples.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Thermal-break aluminium windows	Thermal-break profile, polyamide strip integrity, glass unit, hardware, gasket compression, drainage, U-value target, squareness and installation detail	Higher-performance homes, offices, hotels, façades, contractors and premium window retailers

Supplier scope, site utilities, test requirements and acceptance sample must be confirmed before purchase.

Core Equipment Schedule

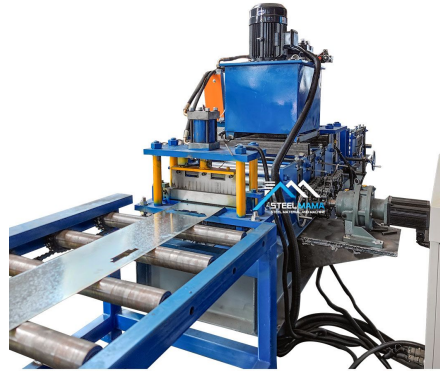
Step	Equipment	Function	Indicative parameter
1	Precision double-head saw	Cuts thermal-break profiles accurately	Profile-specific settings
2	Copy router/end mill/punch	Machines drainage and hardware points	Avoids thermal-break damage
3	Assembly and crimp tables	Builds stable frames/sashes	Joint/squareness control
4	Glazing/hardware station	Completes high-performance units	IGU/gasket compatibility
5	Window QC tools	Verifies finished system	Operation/water/thermal-detail check

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 thermal-break aluminium windows workshop equipment.



Made-in-China supplier reference: second real machine configuration for thermal-break aluminium windows workshop.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Certified thermal-break aluminium profiles, insulated glass units, gaskets, hardware, screws, sealants, cutting consumables, protective film and packaging

Utilities & infrastructure

- Stable electricity, covered material storage and protected finished-goods handling
- Guarded equipment, essential spares, documented maintenance and product-specific safety controls

Quality, safety and environmental controls

- Verify profile certification and polyamide-strip integrity before supply
- Check machining avoids damage/bridging across thermal break
- Approve installed sample for air/water performance, drainage, hardware, glazing and thermal-target detail

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

For an Afghan entry workshop, buying certified thermal-break profiles is safer than attempting profile extrusion: performance depends on system integrity and correct installation.

Component	Indicative range	Notes
Precision cutting and machining cell	US\$9k-32k	Fabrication of purchased profiles
Assembly, glazing and quality tools	US\$6k-22k	Premium window system scope
Freight, setup, tooling and spares	US\$5k-18k	Sample-led commissioning
Indicative entry total	US\$20k-72k	Workshop, profiles 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/thermal-break-aluminium-window-machine.html>
- https://www.made-in-china.com/products-search/hot-china-products/Thermal_Break_Aluminum_Window_Machine.html