SANAATCHI
INDUSTRIAL VISION GROUP

Low-E & Reflective Glass Coating Line

Complete Turnkey Business Proposal

Made-in-China supplier reference: real low-e & reflective glass coating line equipment.

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

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 coated architectural glass through glass washing, high-vacuum magnetron sputter coating or specified coating route, optical inspection, protective handling and packing; it requires tightly controlled clean-room, vacuum, utilities and quality systems.

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.

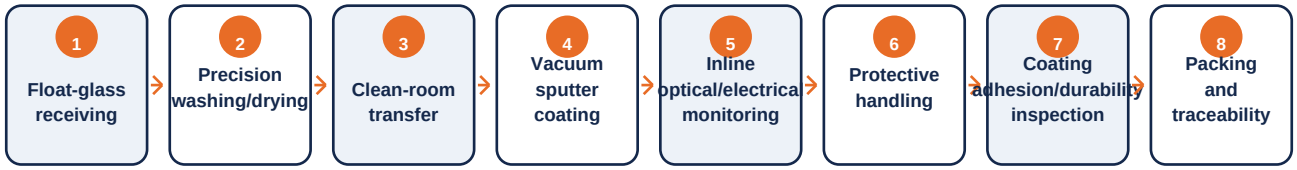
Sanaatchi delivery scope

- 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	This is a strategic high-vacuum coating project. Do not proceed without bankable off-take, proven float-glass supply, coating-stack specification, power/water/vacuum infrastructure, environmental controls and experienced EPC/technical partner.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Low-E and reflective coated glass	Glass substrate, coating stack, visible transmission, reflectance, emissivity, sheet resistance, colour, haze, adhesion and durability	Façades, premium windows, commercial buildings, hotels and energy-efficient construction

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

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Glass wash/dry line	Prepares coating-grade substrate	Particle/film-free surface
2	Vacuum sputter coater	Deposits controlled low-E/reflective stack	Target/vacuum/process recipe
3	Gas/power/vacuum utilities	Maintains stable deposition	Redundant industrial services
4	Optical/electrical inspection	Measures coating performance	Transmission/emissivity/sheet resistance
5	Clean handling/packing	Prevents coating damage	Scratch/contamination control

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 low-e & reflective glass coating line equipment.

Made-in-China supplier reference: second real machine configuration for low-e & reflective glass coating line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified float glass, sputter targets, process gases, cleaning chemistry, protective interleaf/packaging and high-vacuum maintenance consumables

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

- Verify float-glass quality and cleaning before coating
- Control vacuum, target condition, gas flow, coating uniformity and substrate temperature
- Test optical transmission/reflectance, emissivity, haze, colour, adhesion and durability against the declared coating specification

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

Low-E coating is a high-vacuum, precision optical process. It requires bankable volume and technical partnership, not a generic glass-processing workshop.

Component	Indicative range	Notes
Glass preparation and vacuum coater	US$15m-45m	Strategic high-vacuum investment
Utilities, clean room and inline inspection	US$6m-18m	Power/vacuum/process gas scope
EPC, laboratory and commissioning	US$5m-15m	Bankable feasibility required
Indicative strategic total	US$26m-78m	Land/building/float glass 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-processing-machine.html
- https://www.made-in-china.com/products-search/hot-china-products/Glass_Processing_Machine.html