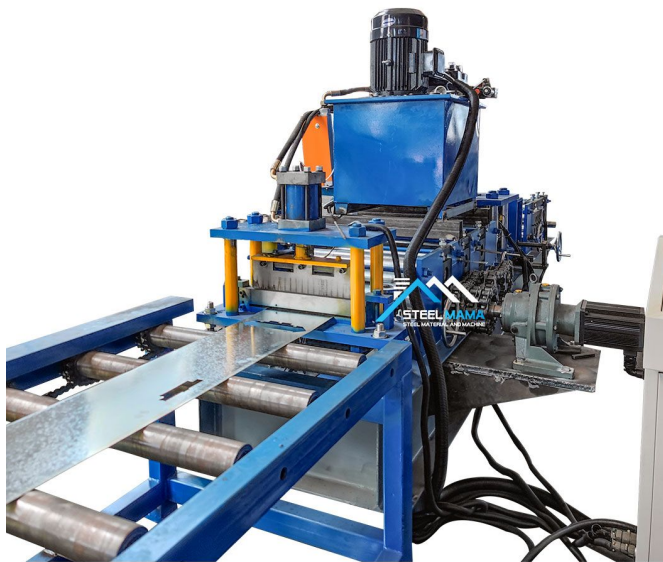




Aluminium Profile Extrusion & Powder-Coating Plant

Complete Turnkey Business Proposal



Made-in-China supplier reference: real aluminium profile extrusion & powder-coating 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 aluminium-profile manufacturing that heats billets, extrudes engineered die profiles, quenches, stretches, ages, cuts, optionally anodises or powder coats, inspects and packs systems for windows, doors and construction.

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 after confirmed billet/alloy supply, approved system designs, die/tooling route, power/gas, coating chemistry/environmental controls, window-fabricator demand, quality standards and experienced extrusion technical management are bankable.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Extruded and powder-coated aluminium profiles	Alloy, temper, profile geometry, wall thickness, length, coating/anodising finish, colour, dimensional tolerance and packing	Window/door fabricators, curtain-wall contractors, furniture, solar structures, distributors and building 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

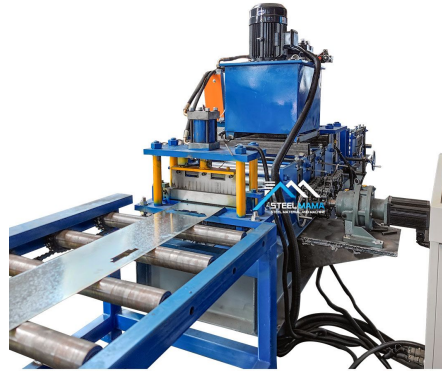
Step	Equipment	Function	Indicative parameter
1	Billet storage/heating	Prepares alloy for extrusion	Alloy and temperature
2	Extrusion press and die system	Forms profile sections	Press force and die quality
3	Quench/stretch/age line	Stabilises profile properties	Temper and straightness
4	Powder coating/anodising line	Applies durable finish	Colour, adhesion and film
5	Cutting, packing and laboratory	Releases profiles	Dimensions and coating tests

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 aluminium profile extrusion & powder-coating plant equipment.



Made-in-China supplier reference: second real machine configuration for aluminium profile extrusion & powder-coating plant.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Approved aluminium billets, extrusion dies, die-steel/service, powder coating or anodising chemicals, pretreatment chemicals, packaging, gas/electricity, water-treatment media 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 alloy/billet contracts, profile system drawings, die trials, press power, coating wastewater/air controls, customer finish requirements and fabricator demand before ordering
- Control billet temperature, extrusion speed, quench, stretch, age, dimensions, wall thickness, coating pretreatment, cure curve, colour and adhesion
- Test alloy/temper certificates, dimensions, straightness, surface defects, coating thickness/adhesion/colour, corrosion performance as specified and packing

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

Aluminium extrusion is a system-and-quality business: billet, dies, temper and finish must match real fabricator demand before choosing press capacity.

Component	Indicative range	Notes
Billet handling, press, die system and handling	US\$35m-120m	Press size and profile range
Ageing, cut-to-length and powder/anodising	US\$20m-75m	Finish portfolio and compliance
Laboratory, utilities, treatment and installation	US\$15m-55m	Quality/environmental scope
Indicative strategic project total	US\$70m-250m	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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