SANAATCHI
INDUSTRIAL VISION GROUP

Warehouse Racks & Shop Shelving Production Line

Complete Turnkey Business Proposal

Made-in-China supplier reference: real warehouse racks & shop shelving production line equipment.

1 system	**1.5-2.0 mm**	**8-15 m/min**	**10-18**
launch rack family	**pallet upright basis**	**supplier forming range**	**entry workforce**

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

A small/medium metal-forming project producing light shop shelving or engineered warehouse-rack components from steel coil and sheet through coil receiving, decoiling and leveling, servo punching, upright or shelf-panel roll forming, cut-to-length, beam and brace fabrication, welding where required, pretreatment and powder coating, component gauging, controlled assembly, load verification, packing and traceability.

Why this project fits Afghanistan

- Warehouses, wholesalers, pharmacies and shops need locally configured storage systems.
- Local production reduces freight on bulky finished racks and enables replacement parts.
- A shop-shelving entry route can precede engineered pallet racking.
- Load capacity depends on steel grade, geometry, connectors, bracing, anchors and installation.

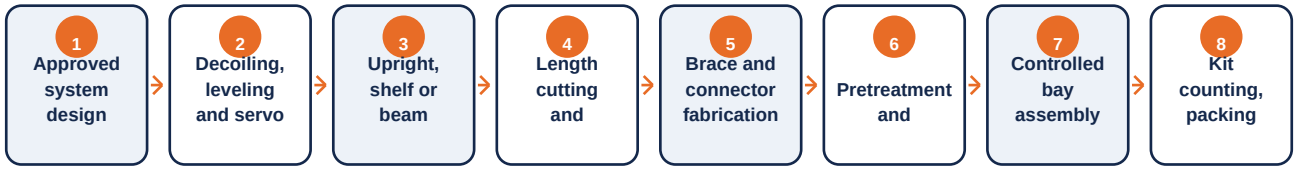
Sanaatchi delivery scope

- 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	Choose one market first. The low-entry route is light boltless shop shelving made with flexible punching, bending and fixtures. If pallet racking is confirmed, procure one 1.5-2.0 mm upright roll-forming line with servo punch and hydraulic cut, plus separate beam/brace tooling, powder coating and a qualified rack designer. Never publish pallet load ratings from supplier advertising alone.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Light shop shelving bay	Bay dimensions, shelf count, distributed load, finish, fasteners and anchoring	Retail, offices and small stores
Selective pallet-rack bay	Engineered upright, beam, connector, brace, anchor, bay and load plaque	Warehouses only after structural verification

Shop shelves and pallet racks are not the same safety class. Pallet-rack quotations require site layout, floor/slab data, seismic assumptions, pallet/load dimensions, forklift clearances and a qualified structural design. Acceptance checks hole pitch, profile, connector fit, welds, coating, bay plumbness, anchors and witnessed proof loading to the approved method.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Coil decoiler and leveler	Feeds specified rack steel	Coil grade/thickness
2	Servo punching system	Creates repeatable connector hole pitch	Tooling-specific
3	Upright or shelf roll former	Forms the launch structural profile	One system family
4	Hydraulic flying cutter and run-out	Cuts component lengths	Encoder controlled
5	Beam/brace fabrication fixtures	Produces matching horizontal members	Separate tools
6	Pretreatment and powder-coat line	Protects components	Cure recorded
7	Gauges and assembly/load-test bay	Releases fit and rated system	Engineer-approved method

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 warehouse racks & shop shelving production line equipment.

Made-in-China supplier reference: second real machine configuration for warehouse racks & shop shelving production line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Certified cold-rolled or galvanized steel coil/sheet
- Beam connectors, base plates, braces, bolts and anchors
- Pretreatment chemicals and powder coating
- Pallets, straps, labels and component separators

Utilities & infrastructure

- Three-phase power and hydraulic services
- Safe coil lifting and long material flow
- Punching noise control and machine guarding
- Ventilated pretreatment/powder-curing area
- Level assembly and proof-test zone

Quality, safety and environmental controls

- Verify steel grade, thickness and coil identity
- Gauge profile, hole pitch, length, bow and twist
- Inspect connectors, welds and brace geometry
- Record pretreatment and powder cure
- Assemble a complete bay and check fit/plumb
- Perform engineer-approved proof load and issue load plaque

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

A sub-US$50k start is feasible only for light shop shelving using flexible workshop equipment. Credible pallet-rack production needs roll forming, coating, engineering and load verification and therefore costs more.

Component	Indicative range	Notes
Entry upright/shelf former and servo punch	US$28k-75k	One system/profile
Beam, brace and connector fabrication	US$15k-45k	Matched component scope
Powder coating, gauges and test bay	US$22k-65k	Safety-critical release
Freight, installation and engineering	US$15k-42k	Design and commissioning
Indicative installed low-entry total	US$80k-227k	Building, coil stock and forklifts 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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