

Common Wire Nails Production Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real common wire nails production line equipment.

200-450/min supplier machine range	2.8-3.4 mm starter wire family	50-80 mm starter nail length	4-7 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 metal-forming line converting purchased bright low-carbon steel wire of the correct diameter into common construction nails through coil receiving and wire inspection, pay-off and straight feeding, automatic cutting, head upsetting, point forming, magnetic collection, barrel polishing and cleaning, dimensional and bend inspection, counting or weighing, bag/carton packing and lot traceability. Wire drawing and galvanizing are separate upstream processes.

Why this project fits Afghanistan

- Construction, carpentry, crates and pallet workshops consume common nails in repeat sizes.
- Buying already-drawn wire creates a much smaller and cleaner entry than a wire-rod drawing plant.
- One diameter and length family reduces tooling, setup and slow-moving inventory.
- Head integrity, point geometry, hardness and count accuracy determine buyer acceptance.

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

Start with one high-volume common-nail family using purchased drawn bright low-carbon wire. Screen one supported Z94-class machine covering approximately 2.8-3.4 mm wire and 50-80 mm nail length, with controlled pay-off, guards, magnetic collection, one polishing barrel, dust/metal-fines collection, gauges and a calibrated count-by-weight pack station. Add wire drawing only after wire-rod chemistry, descaling, lubrication, power and operator capability are proven.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Bright common construction nail	One launch diameter/length family, head, point, straightness, surface, bend and package count	Construction merchants, carpenters and furniture workshops
Crate or pallet nail	Separate shank, head and withdrawal/bend approval for the named wood package	Wooden-crate and pallet workshops after buyer trials

Nail machines must be matched to wire diameter, tensile strength and nail length; published speed is not guaranteed across the full range. Acceptance uses the contracted wire coil and measures stable output, length, shank diameter, head diameter/thickness/concentricity, point geometry, straightness, burrs, cracks, bend performance, machine scrap, die/cutter life and package count.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Wire-coil pay-off and straight feed	Feeds wire without tangles or uncontrolled tension	One wire diameter family
2	Z94-class common-nail machine	Cuts wire and forms head and point	50-80 mm launch length
3	Guards and magnetic collection conveyor	Contains moving tools and gathers nails	Interlocked access
4	Polishing barrel and separator	Removes forming oil and brightens surface	Controlled media/time
5	Metal-fines and dust collection	Controls housekeeping and ignition risk	Fire-safe design
6	Nail gauges and bend-test tools	Releases geometry and mechanical performance	Buyer specification
7	Count-by-weight scale and sealer	Packs repeatable quantities	Calibrated conversion

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 common wire nails production line equipment.



Made-in-China supplier reference: second real machine configuration for common wire nails production line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Bright low-carbon drawn steel wire by chemistry, diameter and tensile strength
- Approved polishing media and limited process oil
- Bags or cartons, labels and pallets
- Cutters, gripping dies, heading dies, punches, bearings and belts

Utilities & infrastructure

- Stable three-phase power with machine-level isolation
- Dry wire and finished-product storage
- Machine guarding, emergency stops and safe coil handling
- Local exhaust for polishing dust and metal fines
- Grinding/tool-maintenance bench separated from production

Quality, safety and environmental controls

- Release wire diameter, tensile strength, surface and coil condition
- Inspect cutter, grip and heading-tool setup before production
- Measure nail length, shank, head and point at fixed intervals
- Check straightness, cracks, burrs and head eccentricity
- Perform specified bend and wood-driving/withdrawal trials
- Calibrate count-by-weight and trace every package to the wire lot

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

The lowest credible entry buys correctly drawn wire and makes one common-nail family on one machine. Wire drawing, pickling/descaling, galvanizing, building and working wire stock are excluded.

Component	Indicative range	Notes
One nail machine, pay-off and guards	US\$8k-20k	One common-nail family
Polisher, separator and dust control	US\$4k-11k	Bright finished nails
Inspection, packing and tool room	US\$3k-8k	Calibrated release
Freight, installation, dies and spares	US\$4k-12k	Starter tooling
Indicative installed low-entry total	US\$19k-51k	Wire drawing, galvanizing, building and wire 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

Sanaatchi Industrial Vision Group

Afghanistan Office: +93 779 819 820 | info@sanaatchi.com

China Office: +86 159 5171 6867 | china@sanaatchi.com

Website: www.sanaatchi.com

Research and image references

- <https://wxshenda.en.made-in-china.com/product/syOxoXYCwchg/China-Steel-Nail-Making-Machine-Wire-Nail-Making-Production-Line.html>
- <https://xchrx.en.made-in-china.com/product/LQBYbTDIOdRA/China-Automatic-1-Inch-Steel-Iron-Wire-Nail-Making-Machine-Common-Nail-Machine-Production-Line.html>