SANAATCHI
INDUSTRIAL VISION GROUP

Shovel, Hoe & Pickaxe Production Line

Complete Turnkey Business Proposal

Made-in-China supplier reference: real shovel, hoe & pickaxe production line equipment.

1 shovel phase-one model	**200-315 t** shovel forming press	**1 forged head** phase-two family	**12-22** expanded 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 mixed tool factory producing pressed shovel blades plus forged hoe and pickaxe heads, then fitting approved local wooden handles. The shovel route blanks sheet, presses the blade, rolls the socket and trims; the hoe/pick route heats bar or billet, forges and punches the eye. Both routes require heat treatment, blasting, grinding, coating, handle machining, assembly and product-specific proof tests.

Why this project fits Afghanistan

- Shovels, hoes and picks are high-turnover essentials in farming and construction.
- Local handle production uses selected Afghan wood and creates repair supply.
- A phased shovel-first route limits dies and metallurgical complexity.
- Each head geometry needs its own process and proof test.

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	Phase the factory. Phase 1 makes one pressed shovel using purchased deep-drawing sheet, a guarded 200-315 t hydraulic press with blank/form/trim/socket dies, plus handle turning and assembly. Add one forged hoe or pickaxe only after installing certified steel control, heater, forging machine and heat treatment. A single hydraulic press does not make all three tools.

Manufacturing Process & Product Portfolio

Integrated process flow

Target products

Product	Typical specification	Primary market
Pressed construction shovel	Blade size/BMT, socket, edge, finish, handle and proof bend	Construction, farms and merchants
Forged hoe or pickaxe	Head mass, eye, edge/points, hardness, handle and impact performance	Agriculture, earthworks and mining support

The supplier listing price often covers only a press. Contract the exact dies and formed sample. Shovel sheet formability differs from pickaxe steel and heat treatment. Acceptance tests blade thinning/cracks and socket fit for shovels; forging defects, hardness and impact for picks/hoes; every tool also receives handle pull and proof-load tests.

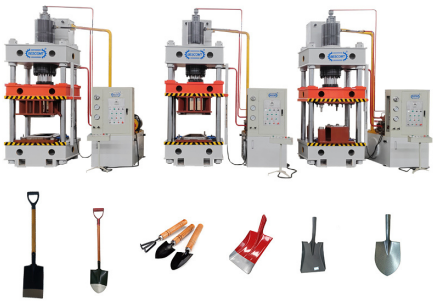
Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Sheet shear/blanking press	Prepares shovel blanks	One model
2	200-315 t hydraulic press and dies	Forms blade and socket	Multi-stage tooling
3	Trim, curl and punch tools	Completes pressed head	Interlocked guards
4	Phase-two heater and forging machine	Makes hoe/pick heads	Separate process
5	Heat treatment, blast and grinders	Develops and finishes heads	Product recipes
6	Handle lathe, drill and assembly jigs	Produces fitted local handles	Moisture controlled

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 shovel, hoe & pickaxe production line equipment.



Made-in-China supplier reference: second real machine configuration for shovel, hoe & pickaxe production line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Deep-drawing-quality sheet for shovels
- Certified medium-carbon bar/billet for forged heads
- Selected straight-grain local hardwood handles
- Coating, abrasives, wedges, fasteners and packing

Utilities & infrastructure

- Stable three-phase power with protected distribution
- Guarded hot-work or forming zones and emergency stops
- Covered raw-material and finished-goods storage
- Fume/dust extraction, fire protection and disciplined housekeeping
- Kiln or controlled handle drying and segregated quench area

Quality, safety and environmental controls

- Release sheet formability and steel chemistry
- Inspect draw cracks, thinning, sockets and holes
- Record forging and heat-treatment recipes
- Measure head geometry, mass and hardness
- Control handle species, grain and moisture
- Perform bend, impact and handle pull tests

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

Under US$50k may buy a shovel press, but not a complete three-product factory. The lowest credible approach launches one shovel and adds a separately controlled forged-head phase later.

Component	Indicative range	Notes
Shovel press and complete die family	US$25k-62k	One pressed model
Trim, socket, handle and assembly tools	US$10k-28k	Phase 1 complete
Optional forging and heat-treatment phase	US$38k-105k	One hoe/pick family
Freight, safety, installation and laboratory	US$12k-34k	Both phases
Indicative phased installed total	US$85k-229k	Phase 1 about US$45k-112k

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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