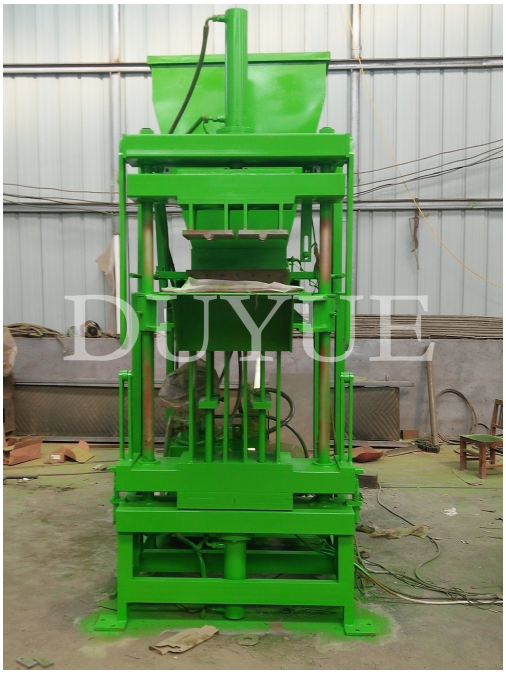
SANAATCHI
INDUSTRIAL VISION GROUP

Compressed-Earth Block Production Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real compressed-earth block production line equipment.

3,000-4,000/day	**1 block**	**5 mm**	**6-10**
supplier screening basis	**launch geometry**	**prepared soil top size**	**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 micro/small line producing stabilized compressed-earth blocks from a laboratory-approved local soil blend, controlled cement or lime stabilizer and water through soil excavation release, drying where necessary, crushing, screening, proportioning, dry mixing, moisture conditioning, hydraulic mould pressing, careful demoulding, protected moist curing, dimensional and strength testing and pallet storage. It is not conventional sun-dried adobe.

Why this project fits Afghanistan

- Suitable local soil can replace much fired-clay or transported masonry material.
- A compact hydraulic press supports rural and peri-urban construction businesses.
- Stabilization and controlled curing improve durability over informal adobe.
- Soil variability and building approval are decisive; machinery alone cannot make a safe block.

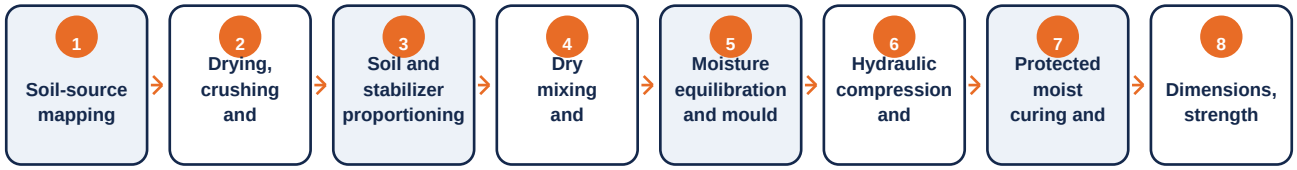
Sanaatchi delivery scope

- 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	Do not buy a press before a geotechnical laboratory approves the soil. Start with one stabilized interlocking block for non-critical low-rise construction only after engineering and authority review. Screen a 3,000-4,000 block/day hydraulic press with soil crusher, 5 mm sieve, calibrated soil/stabilizer dosing, pan mixer, water meter, one mould, curing racks and compression/water-resistance testing.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Stabilized interlocking earth block	Approved soil blend, stabilizer content, dimensions, density, compressive strength, absorption and erosion resistance	Reviewed low-rise housing, compounds and non-critical partitions
Alternative earth-block profile	Separate mould, structural review and site trial	Only after the launch block is proven

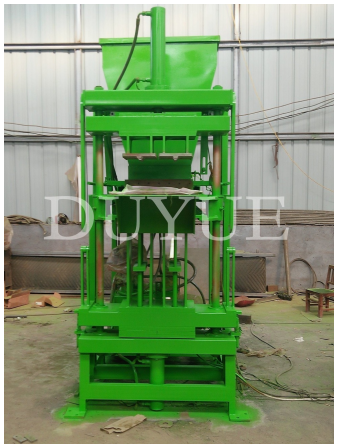
Soil gradation, plasticity, clay mineralogy, organic matter, soluble salts and compaction response must be established for each borrow source. Acceptance uses representative local soil and measures prepared top size, moisture, stabilizer dosage, press pressure, green damage, dimensions, dry density, compressive strength, absorption, wet strength and erosion. Structural use requires local engineering approval.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Soil crusher and 5 mm screen	Creates consistent press feed	Dry friable soil
2	Soil and stabilizer scales	Controls the approved recipe	Batch traceability
3	Pan mixer and water meter	Conditions uniform moulding moisture	No visible balls or dry pockets
4	Hydraulic earth-block press	Compacts the prepared mix	3,000-4,000 blocks/day screening
5	One interlocking mould	Forms launch geometry	Wear and dimension controlled
6	Curing racks and covers	Protects early hydration and drying	Full production inventory
7	Block laboratory	Tests soil and finished durability	Geotechnical plus masonry methods

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



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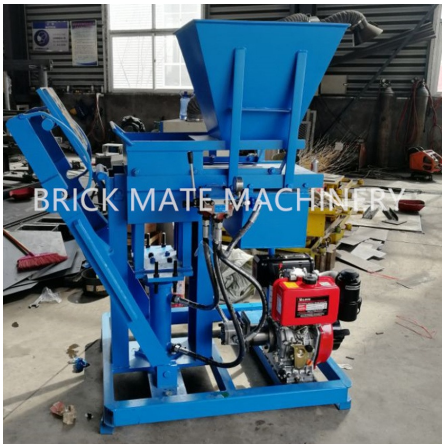

Made-in-China supplier reference: second real machine configuration for compressed-earth block production line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Laboratory-approved local soil from a controlled borrow source
- Released cement or hydrated lime stabilizer
- Clean measured process and curing water
- Pallets, covers, straps, labels and hydraulic/mould spares

Utilities & infrastructure

- Small three-phase supply or approved engine-driven hydraulic option
- Covered soil preparation and pressing area
- Protected moist-curing and dry-ageing space
- Drainage, dust control and safe material handling
- Access to geotechnical and compression-test laboratory

Quality, safety and environmental controls

- Approve every soil source and monitor variation
- Control screen top size and stabilizer dosage
- Adjust water to verified moulding moisture
- Record press pressure and green rejects
- Maintain prescribed moist curing
- Test dimensions, density, strength, absorption and wet erosion

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 line uses one approved local soil blend, one mould and manual handling, but retains stabilizer dosing, moist curing and strength/water tests. Building, excavation fleet and working capital are excluded.

Component	Indicative range	Notes
Soil crusher, screen and batching	US$3k-8k	One local soil blend
Mixer, water meter and hydraulic press	US$6k-16k	One mould included
Curing, laboratory and handling	US$3k-8k	Local racks and covers
Freight, setup, trials and spares	US$3k-9k	Compact plant
Indicative installed low-entry total	US$15k-41k	Land, building and soil excavation 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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