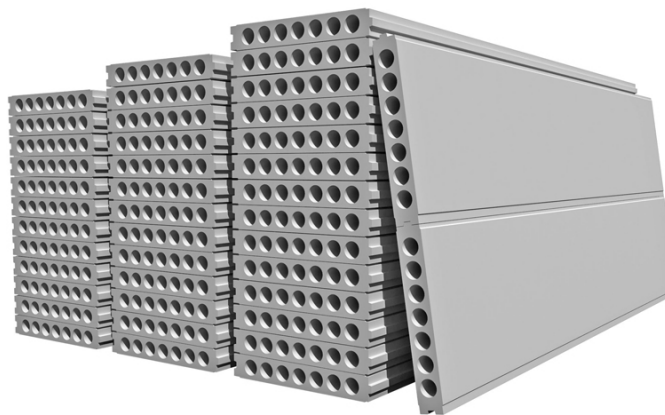




Decorative Precast-Concrete Wall Panel Line

Complete Turnkey Business Proposal



Supplier reference: decorative hollow-core precast panel product family.

1 mixer entry configuration	3-6 moulds starter pattern family	6-10 entry crew	380 V common supplier basis
---------------------------------------	---	---------------------------	---------------------------------------

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 modular production line for decorative and lightweight precast wall panels using locally available cement, sand and aggregates with purchased moulds, reinforcement and approved additives. The line can serve boundary-wall, partition and architectural-panel markets without assuming a full cement or AAC factory.

Why this project fits Afghanistan

- Cement, sand and aggregates can be sourced locally in many Afghan markets.
- Reusable moulds create multiple decorative patterns without changing the full plant.
- Precast panels can reduce on-site masonry time for boundary walls and selected partitions.
- A mould-led launch limits capital until contractors confirm preferred sizes and finishes.

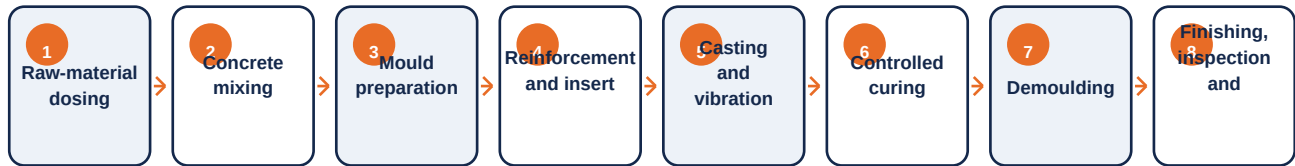
Sanaatchi delivery scope

- 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

Start with one mixer and batching set, a small family of high-demand moulds, vibration/compaction, manual reinforcement placement, controlled curing and simple lifting/finishing equipment. Expand mould count after contractors approve the panel designs.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Decorative boundary-wall panels	Pattern, thickness and span by structural design	Homes, compounds and commercial sites
Lightweight partition panels	Approved core and density system	Warehouses, offices and housing
Matching posts and caps	Moulded to panel connection design	Complete wall packages

Panel dimensions, reinforcement, lifting points and connections must be engineered for intended loads and local seismic/wind conditions. Supplier listing prices often cover selected machines or moulds rather than a complete installed factory.

Core Equipment Schedule

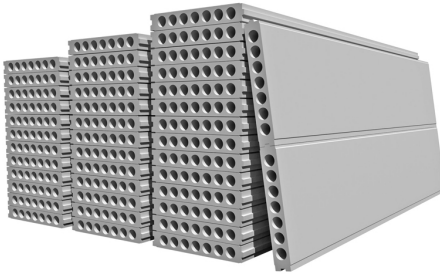
Step	Equipment	Function	Indicative parameter
1	Aggregate bins and weigh batching	Controls cement, sand, aggregate and water dosage	Manual scale or compact weigh system
2	Pan or forced-action mixer	Produces uniform panel concrete	Match batch size to mould cycle
3	Decorative panel moulds	Forms panel size, face texture and edge profile	Begin with a small buyer-approved pattern family
4	Reinforcement/insert station	Positions mesh, bars, lifting and connection inserts	Per structural drawings
5	Vibration or compaction system	Consolidates concrete and reduces voids	Frequency and duration by mix trials
6	Curing area or chamber	Controls moisture and temperature for strength development	Low-cost covered moist curing at entry scale
7	Demoulding and lifting equipment	Removes panels without damage	Rated lifting beam, clamps and hoist
8	Finishing and test equipment	Repairs edges and checks dimensions/strength	Include scales, gauges and test-cube moulds

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

TIANYI MACHINERY
TIANYI SHARES (Stock Code: 201648)

\$ 19 years
experience



Supplier reference: decorative hollow-core precast panel product family.

TIANYI MACHINERY
TIANYI SHARES (Stock Code: 201648)

\$ 19 years
experience



Supplier reference: installed precast panels demonstrating a finished wall application.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Local cement of verified consistency
- Washed graded sand and approved aggregate
- Reinforcement mesh or bars
- Water and approved admixtures
- Release agent, pigments and surface-finish materials
- Optional lightweight core materials only after testing

Utilities & infrastructure

- Three-phase electricity
- Reliable process and curing water
- Covered casting and curing area
- Level mould beds and drainage
- Safe lifting routes and finished-panel yard
- Cement-dust control and wash-water management

Quality, safety and environmental controls

- Approve concrete mix design and structural panel drawings before sale
- Check incoming cement, aggregate grading, moisture and reinforcement
- Record batch weights, water addition, vibration and curing time
- Inspect panel dimensions, cover, surface, cracks and lifting points
- Test cubes/panels at defined frequency and maintain traceable lot records

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

Lowest practical entry: one compact mixer, manual reinforcement placement, a few proven moulds, controlled moist curing and locally fabricated noncritical handling fixtures. Add moulds only after contractor demand is confirmed.

Component	Indicative range	Notes
Mixer, batching and vibration equipment	US\$8k-20k	Compact or semi-automatic entry scope
Starter moulds and reinforcement fixtures	US\$5k-15k	Limit to high-demand designs
Curing, lifting and finishing tools	US\$4k-10k	Use local fabrication where structurally safe
Electrical, civil interfaces and installation	US\$3k-8k	Local labor and simple covered workshop
Freight, clearance, tests and spares	US\$4k-10k	Depends on mould weight and shipping volume
Indicative low-entry total	US\$24k-63k	Land, building and delivery vehicles excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm panel applications, structural design, sizes and market patterns
Phase 2	3-5 weeks	Test local materials and compare complete mould and equipment scopes
Phase 3	5-10 weeks	Manufacture moulds/equipment and prepare casting and curing areas
Phase 4	3-4 weeks	Install, cast trial panels, test strength and approve workmanship

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://www.alibaba.com/product-introduction/precast-concrete-wall-panel-production-line_1424568688.html
- <https://www.alibaba.com/precast-wall-panel-production-line-suppliers.html>