

XPS Thermal-Insulation Boards Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real xps thermal-insulation boards line equipment.

approved sample market gate	defined product launch scope	performance test release gate	batch records traceability
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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

Produces extruded-polystyrene (XPS) thermal-insulation boards by resin storage and dosing, controlled extrusion with approved blowing-agent system, foam cooling/calibration, surface treatment, cutting, packaging and thermal/density/compression testing.

Why this project fits Afghanistan

- Confirm the intended application, applicable standard and buyer acceptance test.
- Use a defined product family and documented formula/tooling at launch.
- Keep material, curing/firing and release records for every lot.

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

This is a strategic polymer process requiring a validated blowing-agent, fire-safety, emissions, resin supply, energy and certification plan. Do not select equipment until board density, thickness, thermal resistance, compressive strength and local code requirements are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
XPS thermal-insulation boards	Density, thickness, thermal conductivity, compressive strength, water absorption, dimensional stability, surface profile and fire classification	Roofs, floors, cold rooms, warehouses, infrastructure and insulation distributors

Supplier scope, feedstock suitability, utilities, installation and acceptance criteria must be confirmed before purchase.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Resin silos and dosing system	Controls polymer/additive feed	Qualified resin/blowing-agent recipe
2	XPS extrusion line	Forms closed-cell foam board	Density/thickness target
3	Cooling/calibration section	Stabilises foam dimensions	Board flatness and thickness
4	Profiling/cutting/packing line	Creates saleable insulation formats	Edge and length tolerance
5	Insulation laboratory	Releases certified boards	Thermal/compression/fire test plan

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 xps thermal-insulation boards line equipment.



Made-in-China supplier reference: second real machine configuration for xps thermal-insulation boards line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Polystyrene resin, approved blowing agent, nucleating/stabilising additives, colour masterbatch where specified, packaging film, cutting spares and fire-safety consumables

Utilities & infrastructure

- Industrial electricity, covered storage and protected finished-board handling
- Guarded machinery, maintenance plan, essential spares and material-specific dust/heat/chemical controls

Quality, safety and environmental controls

- Verify resin and blowing-agent approval, safe storage and emissions controls before commissioning
- Control density, thickness, cell structure, cooling and ageing time
- Test thermal conductivity, compressive strength, water absorption, dimensional stability and fire classification to the target code

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

XPS combines hot polymer extrusion, blowing-agent management and insulation certification; the line must be designed around safety, emissions and certified thermal performance.

Component	Indicative range	Notes
Resin handling and XPS extrusion	US\$2.5m-7.5m	Specialist closed-cell foam process
Cooling, finishing, safety and packing	US\$1m-3m	Board-format and emissions scope
Utilities, lab, fire systems and EPC	US\$1.2m-4m	Bankable-feasibility project
Indicative strategic total	US\$4.7m-14.5m	Land/building/resin working capital 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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- https://www.made-in-china.com/products-search/hot-china-products/Xps_Foam_Board_Extrusion_Line.html