

Recycled-PET Acoustic Wall Panels Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real recycled-pet acoustic wall panels line equipment.

approved sample market gate	defined profiles launch scope	controlled cure quality 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

Makes non-woven acoustic wall panels from clean recycled-PET fibre through fibre opening/blending, web formation, needling or thermal bonding, controlled densification, trimming, acoustic testing and packing.

Why this project fits Afghanistan

- Approve a physical sample and the intended installation system.
- Launch with a limited, saleable profile or finish range.
- Keep batch records for material, mould and quality checks.

Sanaatchi delivery scope

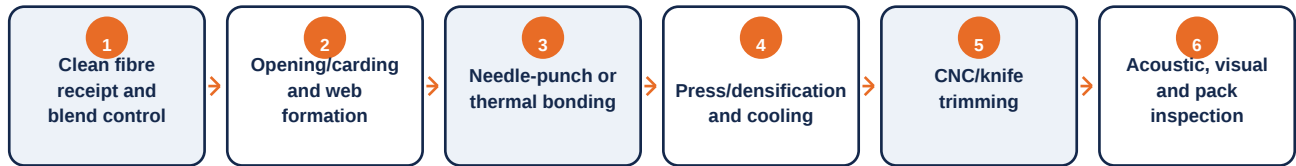
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Use clean rPET staple fibre or a separately verified washing/fibre-preparation supply at launch. Choose panel thickness/density only after acoustic, fire and installation requirements are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Recycled-PET acoustic wall panels	Fibre content, thickness, density, acoustic absorption, fire rating where required, edge quality and mounting format	Offices, schools, studios, hotels, meeting rooms and interior contractors

The supplier must prove the exact equipment scope, material safety data and acceptance sample before purchase.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Fibre opener/carding unit	Builds consistent PET web	Clean rPET fibre input
2	Needle-punch or thermal-bond line	Binds acoustic mat	Density/thickness recipe
3	Press/cooling station	Sets panel form	Flatness control
4	CNC/knife cutter	Creates panel shapes	Defined edge quality

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 recycled-pet acoustic wall panels line equipment.



Made-in-China supplier reference: second real machine configuration for recycled-pet acoustic wall panels line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Clean recycled-PET staple fibre, optional low-melt binder fibre, approved backing/fabric, mounting accessories and packaging

Utilities & infrastructure

- Stable power, extraction/ventilation and dry covered storage
- Guarded cutting equipment, documented maintenance and essential spares

Quality, safety and environmental controls

- Verify rPET input cleanliness and fibre consistency
- Test thickness, density and absorption on target panel samples
- Obtain required fire-rating evidence before selling to regulated projects
- Check cut edges, colour batch and mounting system

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

This opportunity turns verified recycled PET fibre into acoustic products; upstream bottle washing and fibre making are separate operations.

Component	Indicative range	Notes
Fibre opening, web and bonding line	US\$55k-180k	Use prepared rPET fibre
Press, cutting and QC equipment	US\$25k-100k	Panel format and test scope
Indicative entry total	US\$90k-280k	Bottle washing/fibre making 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

- <https://www.alibaba.com/showroom/pet-acoustic-panel-production-line.html>
- https://www.made-in-china.com/products-search/hot-china-products/Polyester_Fiber_Acoustic_Panel.html