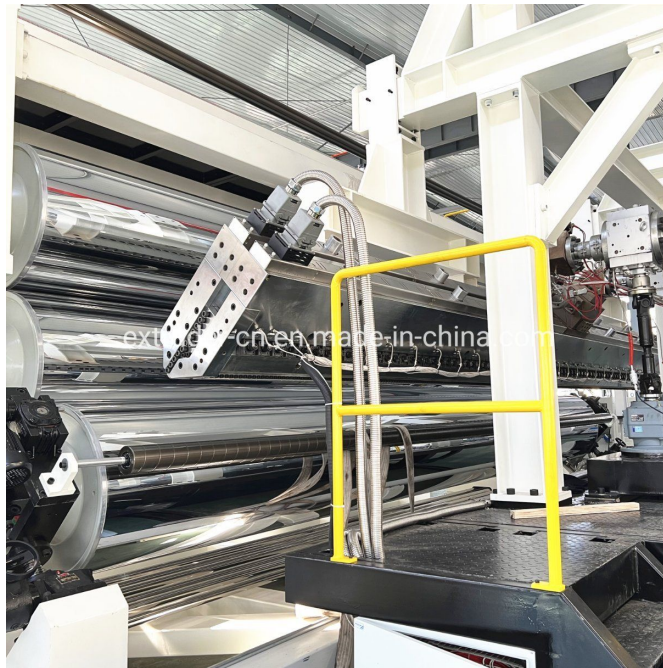


Geotextile & Geogrid Manufacturing Plant

Complete Turnkey Business Proposal



Made-in-China supplier reference: real geotextile & geogrid manufacturing plant equipment.

bankable study investment gate	confirmed feedstock supply gate	EPC scope delivery gate	quality laboratory release gate
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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

Polymer geosynthetics plant that extrudes, weaves/needlepunches or stretches specified structures, heat-sets, winds and tests drainage, separation, reinforcement and erosion-control materials.

Why this project fits Afghanistan

- This is a strategic plant, not a low-entry equipment package.
- Bankable feedstock, utility, permit, market, EPC and financing evidence is required before selection.
- Operate only with an independent laboratory, defined quality release and preventive-maintenance program.

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

Proceed only after civil-project demand, polymer/recycled-fibre quality, design standards, laboratory testing, installation network and project approvals are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Geotextiles and geogrids	Polymer, mass/area, tensile strength, aperture, elongation, permeability, roll width and design standard	Roads, railways, dams, mines, drainage, landfills and civil contractors

Final capacity, process, resource quality, utilities, permit conditions, emissions, acceptance test and commercial terms require independent engineering review before any order.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Polymer/fibre preparation	Controls feedstock	Resin quality
2	Extrusion or fibre web formation	Creates structure	Mass/aperture
3	Weaving/needlepunch/stretching	Develops performance	Tensile and elongation
4	Heat setting/winding	Stabilises rolls	Width and roll build
5	Civil-material laboratory	Releases products	Strength/permeability

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 geotextile & geogrid manufacturing plant equipment.



Made-in-China supplier reference: second real machine configuration for geotextile & geogrid manufacturing plant.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- PP/PET/HDPE resin or qualified recycled fibre, masterbatch, additives, cores, packaging, lab fixtures and utilities

Utilities & infrastructure

- Bankable electricity/fuel/water plans, process cooling and treatment, plant fire safety, laboratory, covered stores and qualified operation team
- Environmental permits, emissions control, waste route, maintenance workshop, critical spares and site-specific safety systems

Quality, safety and environmental controls

- Confirm engineering specifications, polymer source, project demand, test standards, installation practice and purchaser approval
- Control resin moisture, web/grid geometry, tensile, elongation, mass, aperture, roll width and UV stabilisation
- Test tensile, puncture, permeability, aperture, mass and roll dimensions to the specified standard

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

Geosynthetics sell on certified engineering properties, not visual appearance; product testing must match approved project design.

Component	Indicative range	Notes
Extrusion/web/grid forming equipment	US\$35m-120m	Product technology
Finishing, winding and laboratory	US\$15m-55m	Roll and test scope
Utilities and installation	US\$10m-35m	Polymer process controls
Indicative strategic project total	US\$60m-210m	Resin inventory and finance 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

- agricultural-pond-liner-geomembrane-production-line
- plastic-pipe-production-line