



Wool Scouring, Spinning & Carpet-Yarn Complex

Complete Turnkey Business Proposal



Made-in-China supplier reference: real wool scouring, spinning & carpet-yarn complex equipment.

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

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

Strategic wool transformation that grades and scours Afghan wool, dries and blends fibre, cards/combs and spins carpet yarn, dyes where selected, cones/packages it and controls fibre, shade and yarn performance.

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 wool collection/grade systems, water and effluent treatment, colour and dye route, buyer yarn specifications, power/steam, laboratory controls and trained textile operations are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Scoured wool and carpet yarn	Wool micron/length, scouring yield, yarn count, twist, strength, shade, cone weight, dye fastness and customer standard	Carpet weavers, rug exporters, textile workshops, yarn distributors and regional handicraft supply chains

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	Wool sorting and scouring	Cleans fleece	Yield and contamination
2	Drying/blending and carding	Prepares even fibre	Moisture and blend
3	Combing/drawing and spinning	Forms yarn	Count and twist
4	Dyeing/drying and winding	Creates saleable shade cones	Colour and package
5	Textile laboratory and packing	Releases yarn	Strength and shade control

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 wool scouring, spinning & carpet-yarn complex equipment.



Made-in-China supplier reference: second real machine configuration for wool scouring, spinning & carpet-yarn complex.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Afghan wool, detergents, approved dyes/auxiliaries, cones, packaging, boiler fuel/steam, water-treatment chemicals, laboratory consumables and spares

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 wool grades and collection, scouring water/effluent route, yarn counts/colours, dye standards, carpet buyer demand and operator capability
- Control wash yield, residual grease, fibre blend, carding, spin count/twist, dye recipe, drying, cone build and contamination
- Test fibre moisture/cleanliness, yarn count/twist/strength, shade and fastness where specified, cone weight and pack identity

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

Carpet-yarn quality starts with fibre grading and scouring. Water treatment and repeatable shade control are as important as spinning capacity.

Component	Indicative range	Notes
Sorting, scouring, drying and effluent treatment	US\$25m-85m	Fleece quality and water scope
Carding, spinning, winding and dyeing	US\$30m-100m	Yarn count and shade range
Laboratory, utilities and installation	US\$15m-50m	Textile/environment scope
Indicative strategic project total	US\$70m-235m	Wool inventory, land 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

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

- wool-yarn-spinning-line
- wool-washing-carding-preparation-line