SANAATCHI
INDUSTRIAL VISION GROUP

Dry-Mortar Blending & Bagging Line

Complete Turnkey Business Proposal

Made-in-China supplier reference: real dry-mortar blending & bagging line equipment.

1-3 t/h	25-40 kg	1 recipe	6-11
compact starter output	**launch bag range**	**initial mortar**	**entry workforce**

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 small/medium construction-material line converting released dry graded sand, cement and mineral filler into one or more factory-controlled dry mortars through covered ingredient storage, sand drying and screening only if incoming sand is not specification-dry, calibrated major-ingredient and micro-additive batching, low-shear high-uniformity mixing, finished-product buffering, dust-controlled valve-bag filling, weight checking, coding, palletizing, laboratory release and dry storage.

Why this project fits Afghanistan

- Factory blending improves mortar consistency compared with uncontrolled site mixing.
- Local sand and mineral filler can contribute most of the mass when grading and moisture are controlled.
- One basic mortar recipe minimizes additives, laboratory complexity and inventory.
- A simple mixer-only listing is incomplete without dosing, dust control, packing and product testing.

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	Begin with one masonry or plastering mortar validated with local sand and cement. Where specification-dry screened sand can be purchased, screen a 1-3 t/h compact line with four weighed major ingredients, a locked micro-additive station, 1,000-1,500 L ribbon or ploughshare mixer, finished bin, pulse dust collector, 25-40 kg valve packer and mortar laboratory. Add a sand dryer only after a year-round moisture study.

Manufacturing Process & Product Portfolio

Integrated process flow

Target products

Product	Typical specification	Primary market
Masonry dry mortar	Buyer-defined compressive strength, workability, water demand, open time and bag yield	Block/brick masons and contractors
Plastering dry mortar	Separate grading, adhesion, workability, shrinkage and finish specification	Plaster contractors after field trials

Local sand must be tested for grading, moisture, clay, salts and organic contamination. Mixer uniformity depends on fill ratio, sequence and time, especially for low-dose additives. Acceptance measures dosing accuracy, mix coefficient of variation, t/h, dust, bag weight, water demand, workability, retention, density, strength, adhesion/shrinkage as relevant and field application over local masonry.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Ingredient bins and calibrated scales	Meters sand, cement and filler accurately	Four major ingredients
2	Locked micro-additive station	Controls low-dose chemistry	Double-check weighing
3	Ribbon or ploughshare mixer	Produces uniform dry mortar batches	1,000-1,500 L
4	Screw/elevator transfer	Moves powders in enclosed routes	Low segregation
5	Finished-product buffer bin	Decouples mixing from packing	Anti-bridging design
6	Pulse dust collection	Contains cement and silica-bearing dust	All transfer/packing points
7	Valve-bag packer and check scale	Fills controlled 25-40 kg bags	One bag size at launch
8	Mortar laboratory	Tests fresh and hardened performance	Local substrate trials

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 dry-mortar blending & bagging line equipment.

Made-in-China supplier reference: second real machine configuration for dry-mortar blending & bagging line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Dry graded Afghan sand with controlled moisture and clay
- Released cement and mineral filler
- Only validated cellulose ether, polymer or other additives for the chosen recipe
- Valve bags, pallets, wrap, labels, mixer seals and filter spares

Utilities & infrastructure

- Three-phase power and compressed air
- Dry enclosed ingredient and finished-bag warehouse
- Dust extraction and respirable-silica worker controls
- Potable laboratory water and controlled curing area
- Optional dryer fuel and emissions only if wet sand must be processed

Quality, safety and environmental controls

- Release sand, cement, filler and additives by lot
- Calibrate all major and micro scales
- Control mixer fill, sequence, time and residue
- Verify uniformity using tracer or chemistry study
- Test fresh/hardened mortar and field application
- Check bag weight, seal, code and dry pallet storage

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

The lowest credible plant buys dry graded sand and makes one mortar recipe with accurate dosing, dust control and laboratory release. Sand drying, silos, building and working inventory are excluded.

Component	Indicative range	Notes
Ingredient weighing, conveyors and mixer	US$12k-30k	1-3 t/h compact basis
Finished bin, dust collector and valve packer	US$8k-20k	One bag format
Laboratory, pallets and utilities	US$5k-12k	One validated recipe
Freight, installation and spares	US$6k-16k	Dry-sand input basis
Indicative installed low-entry total	US$31k-78k	Sand dryer, building and 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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