

Egg Grading, Candling & Packing Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real egg candling, weighing, grading and coding equipment.

3,000-6,000 eggs/h starter grading capacity	2 launch retail grades	1 farm/date code system	5-8 entry operators
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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

A shell-egg packing line for receiving traceable Afghan eggs, dry pre-cleaning or controlled washing only where the selected market permits it, candling for internal defects and cracks, weight grading, manual defect removal, date or farm coding, tray loading, case packing and cool clean storage. Washing policy, shell treatment and storage temperature must follow the target buyer and local food rules.

Why this project fits Afghanistan

- Egg grading creates consistent retail sizes and improves farm traceability.
- Candling removes visible cracks and internal defects before packing.
- Manual tray packing keeps entry cost and breakage risk low.
- Registered farm lots support recalls and buyer confidence.

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

For the lowest credible entry, use a 3,000-6,000 egg/h infeed, LED candling hood and six- or seven-grade weight sorter with manual tray packing and coder. Launch dry-cleaned eggs from registered farms in two retail grades; add washing only after a validated legal and shelf-life study.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Retail table eggs	Two declared weight grades, intact clean shells, traceable farm/date code	Grocers, supermarkets and institutions
Food-service egg trays	Buyer-selected grade and count in protected transport trays	Bakeries, hotels and caterers

Egg washing is not automatically safer: poor washing can move contamination through the shell and remove the cuticle. The project must choose a dry-clean or controlled wash-and-sanitize policy with the target authority and buyer. Candling does not replace microbiological risk control.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Egg infeed and accumulation table	Receives trays and gently aligns eggs	3,000-6,000 eggs/h
2	Dry brush or approved washer/dryer	Controls visible shell soil under the chosen policy	Washing optional after validation
3	LED candling and crack-check hood	Reveals cracks and internal defects	Manual rejection stations
4	Weight grading machine	Sorts eggs into declared weight classes	Six or seven outputs
5	Manual tray-packing tables	Loads and verifies retail or wholesale trays	Two launch grades
6	Egg coder	Prints farm, lot and date information	Food-contact approved ink
7	Case sealing and label station	Protects and identifies transport cases	Manual entry scope
8	Clean cool store	Holds eggs under the chosen temperature policy	Logged conditions

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 egg candling, weighing, grading and coding equipment.



Made-in-China supplier reference: real compact shell-egg candling and grading configuration.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Traceable shell eggs from registered Afghan farms
- Clean egg trays, cartons, labels and cases
- Approved dry-cleaning or wash/sanitizer consumables
- Food-contact coding ink and calibration weights

Utilities & infrastructure

- Stable electricity matched to motors, controls, refrigeration and lighting
- Potable process and sanitation water with adequate pressure
- Washable food-grade rooms, drainage, pest control and hygiene barriers
- Segregated live/dirty, edible-process, packaging and finished-product zones
- Cold rooms, wastewater and by-product systems sized to the confirmed process

Quality, safety and environmental controls

- Record farm, house, lay/collection date and received quantity
- Reject leaking, heavily soiled, cracked and abnormal eggs
- Calibrate weight grades and verify counts each shift
- Validate any wash water, sanitizer, drying and temperature control
- Monitor breakage, grade yield and customer complaints
- Maintain lot coding, storage conditions and recall procedure

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

Lowest entry uses registered farm lots, dry cleaning, two weight grades and manual tray packing. Automatic case packing, egg washing, farm collection vehicles, building and working stock are excluded.

Component	Indicative range	Notes
Infeed, candling and grading	US\$5k-14k	3,000-6,000 eggs/h
Cleaning module and inspection tools	US\$2k-7k	Dry-clean entry; washer optional
Packing tables, coder and case tools	US\$2k-6k	Manual tray loading
Cool storage and hygiene setup	US\$3k-8k	Buyer-defined conditions
Freight, installation and spares	US\$3k-8k	Rollers and grading parts
Indicative low-entry total	US\$15k-43k	Building, vehicle and egg working stock excluded

Implementation sequence

Phase 1	3-5 weeks	Confirm supply, products, capacity, site, permits and buyer standards
Phase 2	3-6 weeks	Complete process, hygiene, cold-chain and packaging trials
Phase 3	6-12 weeks	Manufacture, inspect and ship the approved equipment scope
Phase 4	4-8 weeks	Install, train, validate sanitation and pass performance 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

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