

Village Milk Collection & Chilling Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real 400 L farm and collection-point milk cooling tank.

300-500 L starter cooling tank	≤4-6°C buyer-defined dispatch target	1 route launch collection network	3-5 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 decentralized raw-milk collection point for Afghan cow or goat milk, covering supplier identification, can receiving, rapid platform tests, weighing, filtration, chilling to the buyer-defined temperature, gentle agitated storage, sampling, insulated dispatch and cleaning. It preserves milk for delivery; it does not make unsafe milk safe.

Why this project fits Afghanistan

- Rapid chilling can reduce spoilage between villages and dairy plants.
- Transparent weighing and testing improve farmer confidence.
- One collection point can aggregate cow or goat milk in separate lots.
- The model supports later pasteurized milk, yogurt and cheese production.

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 calibrated can scales, rapid milk-test kit, inline strainer, one 300-500 L direct-expansion cooling tank with agitator and temperature recorder, insulated cans and a backup-power plan. Begin with one daily collection route and same-day dispatch.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Chilled raw cow milk	Accepted platform tests, traceable supplier lot and buyer-defined dispatch temperature	Licensed dairy processors
Chilled raw goat milk	Separately collected and identified with no cow-milk mixing	Specialty dairy processors

Cooling never corrects adulteration, antibiotic residues, mastitis milk or poor hygiene. The receiving buyer must set acceptance tests, maximum arrival temperature and hold time. Acceptance verifies cooling curve at maximum load, agitation, temperature mapping, cleaning and power-failure response.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Can receiving platform and scales	Identifies supplier and records accepted mass	Calibrated legal-for-trade scale
2	Rapid milk-test bench	Screens temperature, acidity, density and adulteration indicators	Buyer-approved tests and records
3	Inline milk strainer	Removes visible physical matter	Single-use or validated cleanable media
4	Direct-expansion cooling tank	Rapidly chills and stores accepted milk	300-500 L with insulation
5	Gentle agitator	Keeps milk uniform without foaming	Timed or low-speed operation
6	Temperature recorder and alarm	Documents cooling and holding	Calibrated probe and backup log
7	Insulated milk cans	Transfers small lots hygienically	Separate cow/goat identification
8	Cleaning station and backup power	Supports sanitation and cooling continuity	Generator or other verified backup

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 400 L farm and collection-point milk cooling tank.



Made-in-China supplier reference: real refrigerated bulk milk collection tank with integrated condensing system.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Accepted raw cow or goat milk from registered suppliers
- Potable hot and cold cleaning water
- Approved dairy detergents and test reagents
- Food-grade filters, sample bottles and seals

Utilities & infrastructure

- Stable electricity matched to motors, controls and refrigeration
- Potable process water where product contact or cleaning occurs
- Washable food-grade rooms with drainage and pest control
- Segregated raw-material, packaging and finished-goods storage
- Steam, fuel, chilled water or compressed air only where specified

Quality, safety and environmental controls

- Reject abnormal, adulterated or antibiotic-risk milk under buyer procedure
- Record supplier, time, temperature, tests and accepted quantity
- Chill immediately and verify maximum-load cooling curve
- Keep cow and goat milk physically and digitally separate
- Validate cleaning, rinse quality and swab plan
- Maintain alarmed backup power and same-day dispatch discipline

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 one 300-500 L tank, one collection route and same-day dispatch. A tanker truck, laboratory building, multiple village tanks, building and milk working capital are excluded.

Component	Indicative range	Notes
Receiving scales and test bench	US\$2k-5k	One route and buyer test plan
300-500 L cooling tank	US\$5k-12k	Direct expansion with recorder
Cans, filtration and cleaning	US\$2k-5k	Small collection point
Backup power and dispatch tools	US\$3k-8k	Cooling continuity
Freight, installation and spares	US\$3k-7k	Refrigeration commissioning
Indicative low-entry total	US\$15k-37k	Building, vehicle and milk payments excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm raw-material quality, products, capacity, packs and site utilities
Phase 2	2-4 weeks	Run representative Afghan raw-material and packaging trials
Phase 3	5-9 weeks	Manufacture, inspect and ship approved equipment
Phase 4	3-5 weeks	Install, train and validate process, hygiene and release controls

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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