



Glass-Bottle Factory

Complete Turnkey Business Proposal



Made-in-China supplier reference: real glass-bottle factory equipment.

1 bottle family controlled launch	30-80 t/day glass melt screen	IS forming container process	80-160 three-shift workforce
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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 strategic container-glass plant producing one bottle family from tested silica sand, soda ash, limestone and cullet through batch preparation, high-temperature furnace melting, conditioning, IS forming, annealing, inspection, palletising and traceable dispatch. It is not a general glass workshop.

Why this project fits Afghanistan

- Glass bottles can support food and beverage packaging when furnace operations are stable.
- Energy, refractory maintenance and mould quality decide survival of a container-glass plant.
- Bottle weight, finish geometry and inspection performance decide buyer acceptance.

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

Only screen one amber or flint bottle family after proving furnace fuel/power, silica chemistry, cullet supply, refractory life, emissions permits, water, mould maintenance and a contracted beverage or pharmaceutical buyer.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Glass bottles	Volume, weight, finish, wall thickness, annealing stress, impact resistance and visual defects	Qualified Afghan beverages, food and pharmaceutical packaging buyers

Selection requires a site-specific feasibility study, representative material trials and documented acceptance testing for this exact line.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Batch plant and cullet preparation	Creates controlled glass batch	Qualified silica/cullet
2	Melting furnace and forehearth	Melts and conditions glass	Fuel/refractory guarantee
3	IS forming and annealing lehr	Forms stress-relieved bottles	One mould family
4	Inspection, palletising and lab	Releases safe containers	Dimensional/defect checks

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 glass-bottle factory equipment.



Made-in-China supplier reference: second real machine configuration for glass-bottle factory.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Tested silica sand, soda ash, limestone, colourants and clean cullet
- Moulds, coatings, pallets, wrap and refractory consumables

Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Guarded machinery, lockout, ventilation and fire protection
- Covered segregated raw-material and finished-goods storage
- Maintenance tools, safe lifting and critical spare parts
- Continuous fuel/electricity, cooling water, compressed air and furnace-emissions control
- Hot-zone protection, cullet dust collection and fire-safe mould maintenance

Quality, safety and environmental controls

- Approve batch chemistry and cullet contamination
- Record furnace, forehearth, gob and annealing temperatures
- Inspect finish, dimensions, wall thickness, stress, impact and visual defects

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

There is no credible small-machine substitute for container glass: lowest entry means one bottle family after secured fuel, cullet, mould and off-take contracts.

Component	Indicative range	Notes
Batch plant, furnace and forehearth	US\$10m-25m	30-80 t/day melt screen
Forming,lehr, inspection and palletising	US\$6m-15m	One bottle family
Utilities, emissions, civil and installation	US\$7m-18m	Continuous high-temperature plant
Indicative strategic project total	US\$23m-58m	Land, fuel reserve 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

- <https://www.alibaba.com/showroom/glass-bottle-production-line.html>
- https://www.made-in-china.com/products-search/hot-china-products/Glass_Bottle_Production_Line.html