

# Rotomoulded Water-Tanks Production Line

## Complete Turnkey Business Proposal



*Made-in-China supplier reference: real rotomoulded water-tanks production line equipment.*

|                                                  |                                        |                                          |                                        |
|--------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------------|
| <p><b>500-2,000 L</b><br/>launch tank family</p> | <p><b>2 arms</b><br/>shuttle basis</p> | <p><b>1 mould</b><br/>entry geometry</p> | <p><b>8-13</b><br/>entry workforce</p> |
|--------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------------|

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 rotational-moulding plant producing seamless vertical LLDPE water tanks through certified resin receiving, controlled pulverizing or purchased powder, weighing and dry blending, mould charging, biaxial oven rotation, controlled heating, indexed cooling, safe demoulding, trimming and fitting installation, leak, wall-thickness, impact and UV testing, cleaning and dispatch.

### Why this project fits Afghanistan

- Water storage is essential for homes, farms and institutions.
- A shuttle machine permits one mould to heat while another cools.
- Purchased compounded powder lowers the entry risk of grinding and formulation.
- Potable-water safety, wall uniformity, UV life and leak performance are non-negotiable.

### Sanaatchi delivery scope

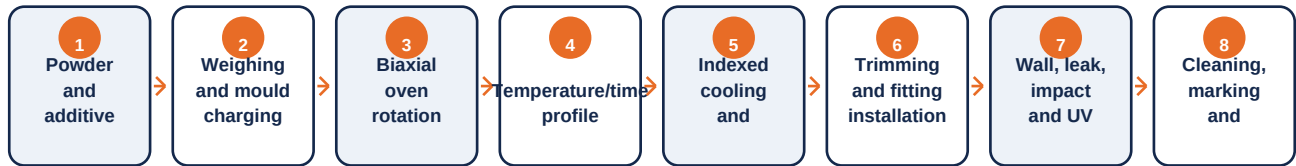
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

#### Recommended configuration

Launch one 500-2,000 L vertical tank family on a two-arm shuttle rotomoulder sized for the heaviest mould. Buy qualified compounded LLDPE powder initially; add a pulverizer and blending room only when dust control and recipe testing are ready. Include one tank mould, oven/fuel safety, cooling, lifting, trimming, fittings and leak/impact/UV tests. Potable-water claims require approved resin, pigments and hygienic handling.

## Manufacturing Process & Product Portfolio

### Integrated process flow



### Target products

| Product                          | Typical specification                                                                                                  | Primary market                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Vertical polyethylene water tank | Nominal/brimful volume, dimensions, mass, layers, wall map, lid, fittings, leak, impact, UV class and potable approval | Homes, farms, shops and institutions          |
| Non-potable utility tank         | Separate resin, colour, fittings and use limitation                                                                    | Construction and agricultural utility storage |

Rotomoulding needs powder with controlled particle size and flow; pellet injection or generic recycled flakes cannot be substituted. Acceptance records oven temperature, internal-air profile and cycle, then checks part mass, wall thickness at mapped points, bubbles, pinholes, warp, threaded fitting torque, filled leak, impact and accelerated UV. Potable tanks must use compliant virgin/approved material; recycled PE is not assumed suitable.

## Core Equipment Schedule

| Step | Equipment                          | Function                                | Indicative parameter           |
|------|------------------------------------|-----------------------------------------|--------------------------------|
| 1    | Two-arm shuttle rotomoulder        | Heats and biaxially rotates tank moulds | Mould/load selected            |
| 2    | Insulated oven and burner train    | Provides repeatable safe heating        | Fuel interlocks                |
| 3    | One vertical-tank mould            | Defines the launch tank geometry        | 500-2,000 L family             |
| 4    | Cooling station and lifting system | Cools and removes tanks safely          | Rated mould handling           |
| 5    | Trim, drill and fitting station    | Completes ports and closures            | Jig controlled                 |
| 6    | Tank performance laboratory        | Maps wall and tests leak, impact and UV | Potable protocol where claimed |

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 rotomoulded water-tanks production line equipment.*



*Made-in-China supplier reference: second real machine configuration for rotomoulded water-tanks production line.*

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

## Plant, Raw Materials & Utility Requirements

### Raw materials

- Qualified compounded LLDPE rotomoulding powder
- Approved UV stabilizer and potable-compatible pigment where applicable
- Certified lids, gaskets, outlets and threaded fittings
- Labels, protective wrap and critical burner/drive spares

### Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Closed-loop cooling water sized for the contracted process
- Dry covered material and finished-goods storage
- Ventilation, fire protection, safe lifting and guarded machinery
- Safe LPG, diesel or gas installation with burner interlocks, exhaust and emissions control
- Large clean outdoor cooling/handling area and rated mould crane

### Quality, safety and environmental controls

- Verify resin certificate, powder size/flow and contamination
- Record charge mass and oven/internal-air cycle
- Map wall thickness and inspect bubbles/pinholes
- Check dimensions, lid and fitting torque
- Run filled leak and impact tests
- Validate UV and potable-water documentation before claims

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 credible low-entry route buys compounded powder and uses one tank mould on a shuttle machine. A pulverizer, extra moulds, carousel automation, building and resin stock are excluded.

| Component                             | Indicative range | Notes                                                 |
|---------------------------------------|------------------|-------------------------------------------------------|
| Two-arm shuttle machine and oven      | US\$85k-185k     | Mould/load-selected basis                             |
| One tank mould, lifting and finishing | US\$28k-82k      | 500-2,000 L family                                    |
| Fuel, cooling and test systems        | US\$24k-65k      | Safety and product release                            |
| Freight, installation and spares      | US\$28k-75k      | Burner and mould trials                               |
| Indicative installed low-entry total  | US\$165k-407k    | Building, pulverizer, resin and extra moulds 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

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### 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://cnhzbenfan.en.made-in-china.com/product/NZoGtFdwwJRv/China-Shuttle-Water-Tank-Making-Machine.html>
- <https://benfanmachine.en.made-in-china.com/product/eZYaCzNLnQhc/China-Shuttle-Rotomolding-Machine-for-Water-Tank.html>