

# Bagged Water Production Project Construction Plan

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## Turnkey Solution from Zhonglian Machinery

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### 1. Project Overview

Driven by the surging demand for safe, affordable drinking water in emerging markets across Africa, Southeast Asia and Latin America, bagged (pouch/sachet) drinking water has become the most cost-effective drinking water solution with low packaging cost, convenient logistics and high market penetration.

This plan provides a full-cycle construction guide for bagged water production projects of all scales, covering site selection, plant layout, capacity design, equipment configuration, staffing and investment budgeting. As a professional beverage equipment manufacturer with over 15 years of industry experience, Zhonglian Machinery delivers one-stop turnkey services covering scheme design, equipment manufacturing, installation and commissioning, helping investors build compliant, efficient and high-return bagged water production lines.

### 2. Factory Site Selection & Plant Layout

#### 2.1 Core Site Selection Criteria

- 1. Water Source Accessibility:** Priority is given to sites close to stable water sources (municipal tap water, groundwater) to reduce water intake costs. Raw water quality must meet drinking water source standards to avoid excessive treatment costs.

2. **Logistics Convenience:** Close to trunk roads and logistics hubs for easy delivery of packaging film materials and distribution of finished products, reducing secondary handling costs.
3. **Environmental Hygiene:** The site must be far away from industrial pollution sources, landfills and livestock farms, complying with the environmental hygiene requirements for food production.
4. **Infrastructure Support:** Stable power supply with sufficient capacity, complete drainage and fire protection facilities to support long-term continuous production.
5. **Policy Compliance:** Located in a formal industrial park with complete industrial and commercial planning, for smooth handling of food production licenses, environmental assessment and other formalities.

## 2.2 Plant Area & Functional Zoning

The plant follows a one-way GMP food production flow design to avoid cross-contamination. The area requirements for different production scales are as follows:

Project Scale	Hourly Capacity (5L bags)	Recommended Plant Area	Core Functional Zones
Small-scale	1,000 – 2,000 bags	600 – 900 m <sup>2</sup>	Raw material warehouse, water treatment workshop, filling workshop, finished goods warehouse, office
Medium-scale	3,000 – 6,000 bags	1,200 – 1,800 m <sup>2</sup>	Add independent quality inspection room, packaging material storage and power distribution room
Large-scale	8,000 – 12,000 bags	2,500 – 3,500 m <sup>2</sup>	Reserve expansion space, configure automatic finished product conveying and palletizing area

*Plant clear height  $\geq 3.5\text{m}$ , floor load capacity  $\geq 3\text{t/m}^2$ .*

## 3. Capacity Planning & Product Positioning

### 3.1 Main Product Specifications

Bagged water products are mainly divided into two categories according to market demand:

- **Household & catering specification:** 3L, 5L, 10L stand-up pouches, replacing barreled water for household and commercial drinking scenarios.
- **Portable retail specification:** 200ml, 500ml small sachets, the most demanded format in emerging markets, suitable for street retail and outdoor scenarios.

### 3.2 Capacity Grade Design

Capacity Grade	Output per 8-hour Shift	Annual Output (300 working days)	Target Market
Entry-level small scale	8,000 – 16,000 bags	2.4 – 4.8 million bags	Township and county-level regional market
Medium-scale	24,000 – 48,000 bags	7.2 – 14.4 million bags	Prefecture-level city and surrounding regional distribution
Large-scale	64,000 – 96,000 bags	19.2 – 28.8 million bags	Provincial regional market + multi-city distribution

## 4. Core Equipment Configuration (Supplied by Zhonglian Machinery)

Zhonglian Machinery provides a full set of automated bagged water production lines. All core equipment is made of food-grade 304 stainless steel, fully complying with international food hygiene standards. The standard configuration is as follows:

### 4.1 Water Treatment System (Core Quality Guarantee)

- **Composition:** Quartz sand filter, activated carbon filter, water softener, precision filter, RO reverse osmosis unit, ozone sterilizer, UV sterilizer
- **Function:** Removes sediment, residual chlorine, heavy metals, bacteria and other impurities step by step, ensuring finished water meets WHO drinking water quality standards
- **Customization:** Ultrafiltration process can be configured for mineral water projects to retain natural mineral components

### 4.2 Automatic Bagged Water Filling System

- Core equipment: Fully automatic integrated bag forming-filling-sealing machine (single-head / multi-head optional)
- Function: Completes film forming, quantitative filling, sealing and cutting in one process, with fully enclosed production to avoid secondary pollution
- Features: High filling accuracy, adjustable bag length and capacity, compatible with PE film packaging bags of various specifications
- Optional: Automatic bag feeding system for pre-made stand-up pouches

### 4.3 Auxiliary & End-of-Line Equipment

- Raw water tank, purified water storage tank
- CIP clean-in-place system
- Inkjet coding machine (for production date and batch number)
- Finished product conveying platform
- Automatic palletizing system (for large-scale lines)
- Air compressor system

## 5. Staffing Configuration

Configured based on production scale and automation level, standard 8-hour shift:

Position	Small-scale Line	Medium-scale Line	Large-scale Line
Production line operator	2	3 – 4	5 – 6
Quality inspector	1	1 – 2	2
Warehouse & material handler	1	2	3 – 4
Equipment maintenance technician	1 (part-time)	1	2
Factory management	1	1	1 – 2
<b>Total per shift</b>	<b>5 persons</b>	<b>8 – 10 persons</b>	<b>13 – 16 persons</b>

*All personnel will receive professional operation and food hygiene training from Zhonglian Machinery before taking up their posts.*

## 6. Total Investment Budget Estimation

The following is the budget reference for standard turnkey projects (excluding land purchase cost), which can be customized according to actual demand:

Budget Item	Small-scale Project (2,000 bags/h)	Medium-scale Project (6,000 bags/h)	Large-scale Project (12,000 bags/h)
Core production equipment (Zhonglian)	35,000– 55,000	85,000– 130,000	180,000– 260,000
Plant renovation & infrastructure	15,000– 30,000	40,000– 65,000	90,000– 150,000
Initial raw materials & packaging materials	10,000– 20,000	25,000– 40,000	50,000– 80,000
Qualification handling & miscellaneous	8,000– 15,000	15,000– 25,000	30,000– 50,000
<b>Total estimated budget</b>	<b>68,000– 120,000</b>	<b>165,000– 260,000</b>	<b>350,000– 540,000</b>
<b>Estimated payback period</b>	<b>1.3 – 2.0 years</b>	<b>1.8 – 2.5 years</b>	<b>2.3 – 3.2 years</b>

**Note:** The above budget is for reference only. The actual cost is affected by raw water quality, automation configuration, local labor costs and other factors. The final quotation shall be subject to the official scheme of Zhonglian Machinery.

## 7. Project Implementation Schedule

Zhonglian Machinery provides full-process tracking service, and the standard turnkey project cycle is as follows:

- 1. Scheme confirmation stage** (3 – 7 days): Demand communication, on-site investigation, customized scheme and quotation output
- 2. Equipment manufacturing stage** (25 – 40 days): Customized production and factory testing according to the scheme
- 3. Delivery & infrastructure stage** (20 – 40 days): Equipment sea freight, simultaneous plant renovation on site
- 4. Installation & commissioning stage** (10 – 20 days): On-site installation, pipeline connection, equipment commissioning

5. **Training & trial production stage** (5 – 10 days): Operator training, trial production verification, official launch

## 8. Zhonglian Full-Process Support & Services

As a professional beverage equipment solution provider, Zhonglian Machinery provides all-round support for your project:

- Customized scheme design tailored to your actual demand and budget
- Full set of food-grade production equipment with stable performance and long service life
- On-site installation and commissioning by senior engineers
- Systematic operation training, maintenance training and food hygiene training
- 12-month whole-machine warranty, lifetime after-sales technical support
- Long-term spare parts supply with fast response and low maintenance cost

## 9. Contact Information

### Zhonglian Machinery (ZOO LINKED MECHANICAL)

Official Website: [www.allylinkmachine.com](http://www.allylinkmachine.com)

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We provide free project consultation, scheme design and budget quotation. Welcome to contact us for customization.

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