

**Professional Water Treatment & Bottling Solutions** 

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# 5 Gallon Bottle Water Production Line

Output: 450 Bottles per Hour



#### **Part One Water Treatment Plant:**

## 10,000L/H RO Water Purification System



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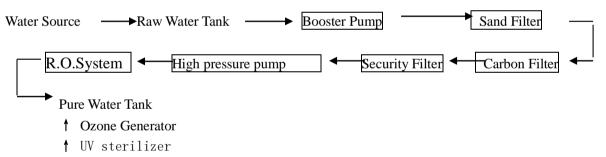
### 1. Design basis and treated water standard:

- 1.1 Raw water: Surface water(Underground water; Raw water quality analysis report is necessary(TDS, Conductivity, pH, Hardness, Iron, Manganese contents, etc.)
  - 1.2 Produced water's application: Pure drinking water
  - 1.3 The capacity of produced water: 10,000L/H
  - 1.4 System Configuration: Pretreatment + One Stage Reverse Osmosis Desalination System.
  - 1.5 Designed recovery: 50-65%.
  - 1.6 Rejection rate:≥97%
  - 1.7 Voltage: 3 phases, 380V, 50Hz; Power: 21KW

### 2. System requirements:

- 2.1 Inlet pipelines: inlet pipe connected with the raw water tank entrance.
- 2.2 Cable: According to the calculated capacity of electric power, the user should send it on the control cabinet.
- 2.3 Outlet water pipelines: From pure water tank to the pure water using point.
- 2.4 Concentrated Water Treatment: Discharge to the wastewater pool (user considered).
- 2.5 Water temperature:5-35°C

#### 3. Process:



### 4. Main Components List:

Basic Configuration	Item	Description	Remark
Pretreatment part	Feed pump	CNP(Nangfang) CDL16-30	380V/50Hz, 3KW
	Sand filter	Φ1200×2600Xδ3.0	SUS304 (filter 1900kg)
	Active Carbon filter	Φ1200×2600Xδ3.0	SUS304 (filter 550kg)
	Micron filter	40"×5 core 2sets	SS304
	Pressure pump	CNP CDL16-140	380V/50Hz
RO Part	RO membrane	FILMTEC BW30-400 x 9pcs	
	Membrane vessel	8040" 3 SETS	FPR
Piping and controlling valve	SOFT STARTER	15kw	SIEMENS
		U-PVC piping & Valves,	
controlling valve	Piping and valves	SS304 high pressure part	



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	Control system & Indicator	Water level control, Pump protecting, Automatic electric valve control	Automatic Control box with LS PLC system
	Oil Seal Pressure gage	6pcs in total	SS304
Other fittings of	Conductivity table	CCT2230 X 2sets	
machine	Main frame	Stainless steel 1set	
macimic	Pressure Control	P6E	
	Pipeline flow meter	1-16M³ 2set	
	Cleaning tank	1000L	
Cleaning part	Cleaning pump	CNP CHL8-40	
	Solenoid valve	DN40	
Ozone System	SOZ-32G Ozone Generator, DN32 mixing unit and CNP CHL8-30 mixing pump		
UV Sterilizer	FS-100		
Water Tanks	10,000L Raw Water Tank and Pure Water Tank  Suggest to Pre Buyer		Suggest to Prepare by Buyer

# Part Two 5 Gallon 450B/H Bottling Production Line

1:Typical production follow chart of 5gallon bottled drinking water from small output:

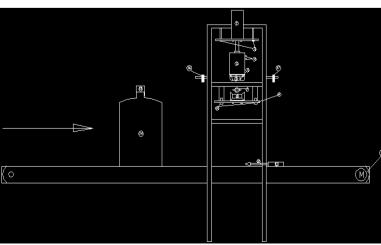
Automatic Decapper → Bottle Exterior/Inner Machine → Bottle-Feeding Machine → Filling Machine Label-Shrinking Machine.

## 2:Specification for each machine:

#### 1) Automatic Decapper (Mode JBG-2):

#### Picture/Structural layout plan:







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#### **Features:**

- 1) It is controlled and completed by PLC automatically through precise orientation with little manpower and low working intensity.
- 2) The complete set of equipment is manufactured by high-tension stainless steel materials and stainless plate steel with precise argon arc, infrequent distortion and beauty welding veins.
- 3) In order to make the performance of the device more stable, the electrical components are manufactured elaborately by imported series of products or name brand series of products at home.
- 4) Body material:SS304.

#### **Technical Parameter:**

Capacity	400-600B/H
Bottled Dimension	1)φ270×490×φ56mm 2)φ230×415×φ56 mm
Cap's specification (mm)	Φ58×40 (strip:L18mm,W:7.5mm)
Input power:	1.15kw;AC 380V±5%; 50HZ
Size	475×655×1750(mm)

#### 2.Bottle Exterior/Inner Machine(Mode:JNWS-1):

#### Picture/Structural layout plan:





#### **Features:**

1) This **exterior and inner washing** machine for 5 gallon recycled bottle, which is the necessary machine for the empty bottle pretreatment of drinking water product line, featuring with simple structure, easy operation and good scrub performance.



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- 2) Reliable performance and high working efficiency
- 3)Body material:SS304.

#### **Technical Parameter:**

Capacity	350-450B/H
Bottled Dimension	1)ф270×490×ф56mm 2)ф230×415×ф56 mm
Cap's specification (mm)	Ф58×40 (strip:L18mm,W:7.5mm)
Input power:	2.3kw;AC 380V±5%; 50HZ
Size	1650×960×1945(mm)

#### Picture:



## 3. Bottle Exterior Washing Machine (Mode:JWS-1):

#### **Features:**

- 1) This **exterior washing** machine for 5 gallon recycled bottle, which is the necessary machine for the empty bottle pretreatment of drinking water product line, featuring with simple structure, easy operation and good scrub performance.
- 2) Reliable performance and high working efficiency
- 3) Body material:SS304.
- 4) Function: With Brush washing and water spraying for bottle outside

#### **Technical Parameter:**

Capacity	400-500B/H
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Input power	2 kw;AC 380V±5%; 50HZ
Size	2535×900×1650 mm
Washing Heads	4 Outer Washing Brushes
Weight	340kg

#### **Configuration Table:**

Name	Specification	Remark	Qty.
Gear Motor	0.55KW (220V/380V)	Conveyer motor	1
Brush Motor	0.75KW (220V/380V)	Brush motor	1
Washing Pump	0.37KW (220V)	LVD	1
	0.37KW (220V)	LX Pump	1
Indicator	AD-16		3
Electric leakage switch	C65N- 4P/2P	Schneider	1
AC Contactor	GMC-9	LS	4

## 3.Automatic Rinsing /Filling/Capping Machine Mode: XG-100/J (450B/H) "L"

#### **Pattern**

## 4.Picture/Structural layout plan:





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#### **Features:**

- 1) Controlled by PLC with the functions of automatic finish, precise orientation, little manpower and low working intensity.
- 2)The complete set of equipment is manufactured by high-strength stainless steel materials and stainless plate steel with precise argon arc, little distortion and fair welding veins
- 3) Beautiful appearance, anti-corrodibility, thorough disinfection, effective anti-air pollution and high quality
- 4) Microcomputer Auto Bottle Washer & Filler and Capper in one unit.
- 5) Body material: SS304.

#### **Technical Parameter:**

Items		Specification
Production capacity		450Buckets/hour
Bottle's capacity		18. 9 Liters (equal to 5 gallons)
		11. 3 Liters (equal to 3 gallons)
В	ottle's specification (mm)	Φ270×490×Φ56
• • • • • • • • • • • • • • • • • • • •		Φ230×420×Φ56
(	Cap's specification (mm)	Φ58×40 (strip:L18mm,W:7.5mm)
	Rated input power	6.3KW
	Bottle convey motor	0.55KW
	Tap water washing pump	0.75KW
Electromotor	Disinfectant washing pump	0.75KW*3
power	Pure washing pump	0.75KW
	filling pump	0.55KW*2
	Cap-aligning electromotor	0.09 KW
	Power supply	AC 380V ±5% 50Hz
	Rated current	28A
	Outer size	3830×970×1600(mm)
Rec	quirement of air compressor	0.1 M <sup>3</sup> 0.17 M <sup>3</sup> Min 0.8Mpa/Cm <sup>2</sup>
Re	quirement of water supply	7.5M <sup>3</sup> /H
	Working Position	Three row six stations for bottle washing, three
		filling nozzles, and three capping heads
		first station: drip-dry
		The second, third fourth station: disinfectant
		washing
		The fifth station: tap water washing
		The sixth station: pure water washing
Main Components		1)Signal Relay(OMRON);
		2)PLC(LG)
		3)Exchange contactor(LG)
		4)Speed-down motor

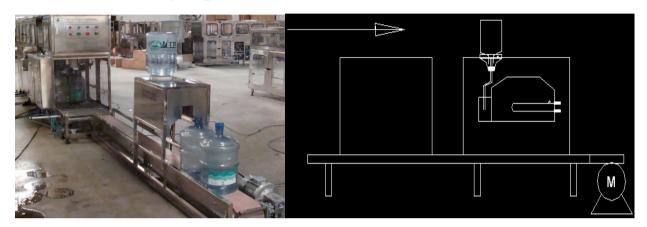


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5)Proximity switch(TURCK)
6)Creepage air switch ( MERLINGERIN)
7)Cylinder(AIR TAC)

## **5.Automatic Sealing Machine (Mode:FK-2):**

#### Picture/Structural layout plan:



#### (1)Function & Features:

Shrink the film around the cap, extending the storing time.

#### (2) Technical Parameter:

Capacity	300-450 B/H
Power	4.4KW;16A
Dimension(mm)	2000x400x980
Weight	55KG



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## 6.Automatic Caps cleansing and Loading System: JSG-1:

#### Picture/Structural layout plan:



#### (1)Technical parameters

Capacity		500-700pcs/hour
Cap's specification (mm)		Φ58×40 (strip:L18mm,W:7.5mm)
Input Power		0. 60KW
	Motor	Cap dosing blower fan: 0.37KW
Motor Power		Cap tidying motor: 0.06KW
Motor Power	Drive Motor	Disinfectant Washing Pump:0.09KW
		Pure Washing Pump:0.09KW
D V-14		AC 380V±5% 50HZ
Power Voltage		
Current rating		2A
Net Weight		130Kg
Overall dimension		Cap Washing Part: 1385×640×1720(mm)
		Cap Feeding Part: 540×660×600(mm)