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Automatic Bottled Water Production Line

Output: 9000-10,000B/H based on 600ml bottle, bottle size: 600ml, 1.1L & 1.6L

Specification for each Item

Part A: Automatic Bottle Blow Molding Machine

Product introduction

1.1 high-efficient preform supply system:

Fully-automatic preform-unscrambled and preform-loading structure, which not only achieve faster and high-efficient preform-unscrambled and preform-loading, but also improving the stability of the whole machine running process. There is a sensor installed in the preform down-track, when the preform track lack of preform, the preform will be delivered into the preform-unscrambled system from the hopper automatically. And the one-way preform-inserted design can solve the preform-blocked and preform abrasion problem.



2.2 Servo preform-divided system:

Preform are divided equidistance by servo motor. The stroke and speed of servo motor are easy adjusted through the HMI. All complicated process are done by digitization, safe, fast and accurate. Compare with the traditional server-ways preform-divided, cylinder type preform-divided etc, the servo motor control one-way preform-divided, speed is more faster and position is more accurate.



2.3 Intelligent heating system:

Preform are heated by infrared lamps which make the preform stretching more equably and higher transparency. With the help of imported reflective mirror aluminum plate, the heat energy of lamps are took full advantage of; heating time is





shorter ; lower power consumption and improving the production capacity. The temperature of each lamp of every layer can be adjusted up and down, forward and backward individuality according to different preforms. Intelligent ventilation system keeps the oven temperature inside constantly.

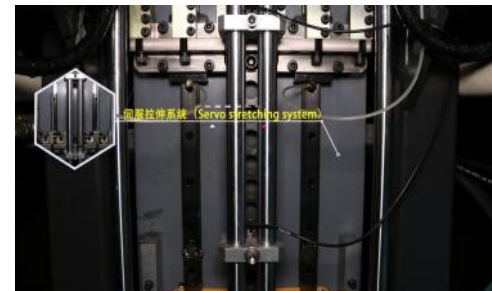
2.4 Servo mold-clamping system:

The mold-clamping system is drove by servo motor and mechanical connecting rods
The molds and bottom mold are clamped synchronously through servo motor.
High-pressure mold-locked by the high-pressure pressurized plates behind the mold framework which can reduce visibility of the bottle clamping line effectively and ensure the bottle quality. Drawer type mold structure design, easy mold exchange, skillful engineer can finish the mold exchange in half an hour.



2.5 Servo stretching system:

The servo motor drives the gear rack to stretching. With our developed photoelectric and mechanical limits these two double security, the stretching rods can not hit the bottom mold. The pre-blowing and 2nd blowing cycle time can be adjusted individually in the HMI according to different preform and bottle design. The stretching rods can be adjusted automatically, high flexibility.



2.6Auto lubrication system:

Fully auto lubrication system supply lubricate oil to every moving parts of the mold-clamping system in setting time and quantity, accurate oil inject, same inject quantity to avoiding the oil pollute the machine. Also saving manpower, easy operation. Machines are the supporter of the industry production. Good lubrication for machines can reduce the abrasion, improve production efficiency and saving energy.





2.7 HMI operation system:

Our blow molders are high intelligence, easy operation. Chinese-English language color touch screen, with perfect monitoring sense setting, troubleshooting display, auto calculating report, memory store etc. function. You can control the machine production situation all the time.



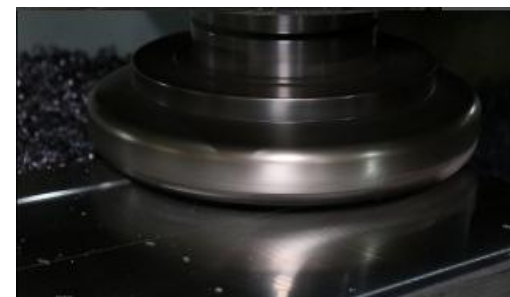
2.8 Chilled/cooling water recycle system:

Our self-developed heating bases cooling setting ensure the heating bases cooling effect after the bottle-blowing. There are coolant gallery installed inside the oven which use to cut off the heat from the lamps during the preform-heating. The cooling air system under the coolant gallery protects the neck finish from deformation. The chilled water connect to the mold, cool down the mold rapidly and improve the machine production efficiency.



2.9 Standardize spare parts and quality electric components:

Most of our spare parts meet the international production standard. The standard parts are produced in bulk in our CNC machining center and put into use after strictly inspection by our QC department. These high quality standardize parts ensure the stability and reliability of our machines and reduce the maintenance cost. The motors, PLC, cylinder, solenoid valves, electric parts and blowing valves etc key components of our machines are use quality products of China and international famous brands.





2. Main electric component list

No.	Name	Origin	Brand
Electric/control component			
1	Mold-clamping servo motor	Japan	YASKAWA
2	Stretching servo motor		
3	Main transmission servo motor		
4	Preform-divided serve motor		
5	Servo driverButton		
6	Air switch	France	SCHNEIDER (TE)
7	Contacteur		
8	Intermediate relay	Japan	OMRON
9	PLC		
10	PLC expand module		
11	Touch screen	Taiwan	Panel
Valves/adaptor			
1	Pre-blowing valve	USA	PARKER
2	2 nd blowing valve		
3	Exhaust valve		
4	One-way valve		
5	Pressurizing mold-locked motion valve		
6	Step chain	Taiwan	KMC
7	Mold-clamping lead rail	Taiwan	ABBA
Remarks: all above component are imported with original packaging. Longsun has the right to change the default parameter according to the marketing change or customer special requirement without further notification, a 5% change of the equivalent parameter will be allowable against the marketing trend and the spare parts supply condition!)			



3. LX-9E machine main parameter

	Item	LX—6E
Main machine	Maximum Bottle capacity	700ml
	Maximum bottle diameter	Φ68mm
	Neck diameter	Φ18~38mm
	Maximum bottle height under neck	<240mm
	Maximum preform height under neck	<115mm
	Clamping stroke	90mm
	Bottom die stroke	50mm
	Bottle pitch	76.2mm
	Maximum output rate (bph)	9,600
	Number of molds	6
Heating part	Number of heating modules	4
	Number of heating lamps	8
	Number of preform bases	108
Electric part	Voltage	380V
	Frequency	50/60Hz
	Service power	30~50kw/h
	Installation power	75kw
Air source	Low pressure	1Mpa
	Low pressure air consumption	2m ³ /min
	High pressure	3.5Mpa
	High pressure air consumption	9m ³ /min
Chilled water (Water temperature ≤18°C)	Pressure	2~4bar
	Flux	9m ³ /h
Weight	G.W.	Around 7,000kg
Dimension	Main machine (L×W×H)	4500m×2400m×2300m
	Preform unscrambler(L×W×H)	2800m×2800m×3000m
Remarks: * 9600bph output rate base on 555ml, 18 gram C'estbon water bottle. * High pressure air consumption depends on PET bottle volume, altitude etc.		



4. Quotation and business term.

5.1. Machine model solution:

This proposal design capacity is 12000bph. According to the actual situation, we recommend to use Longsun fully servo high-speed blow molding machine: LX-9E. Quantity: 1 set.

5.2. Quotation:

Main machine			(Currency: RMB)		
NO.	Name	Qty	Unit price	Subtotal	Remarks
1	Fully servo high-speed blow molding machine: LX-9E	1 set	¥ 550,000	¥ 550,000	Longsun
2	Preform hopper	1 set			
3	Intelligent lift system	1 set			
4	Preform-unscrambled system	1 set			
5	Bottle-eject system	1 set			
6	Mold (Magnalium alloy 7075T61)	1 set	¥ 30.000	¥ 30.000	Longsun
7	Chilled system	1 set	¥ 40.000	¥ 40,000	
8	Total amount: RMB Nine hundred and Thirty-Five thousand.				
Blow molding machine auxiliary equipment					
9	High-pressure air compressor system(6m³/min 35kg)	1 set	Customers can choose and purchase on their own.		
10	Low-pressure air compressor system(3m³/min 10kg)	1 set			

5.3. Payment term:

- The above quotation is based on EXW trade terms.
- 40% deposit after signing the contract.
- The buyer should do the FAT in seller's factory before delivery. After the FAT pass, the buyer should pay the 60% of the contract total amount before the machine delivery.

5.4. Installation & testing

We charge **US Dollar 100 per technician per day**, and minimum charge period is **20days**. The buyer shall cover charge for our technicians' accommodation, food, transportation and insurance and arrange visa for our staff(s).

5.5. Guarantee

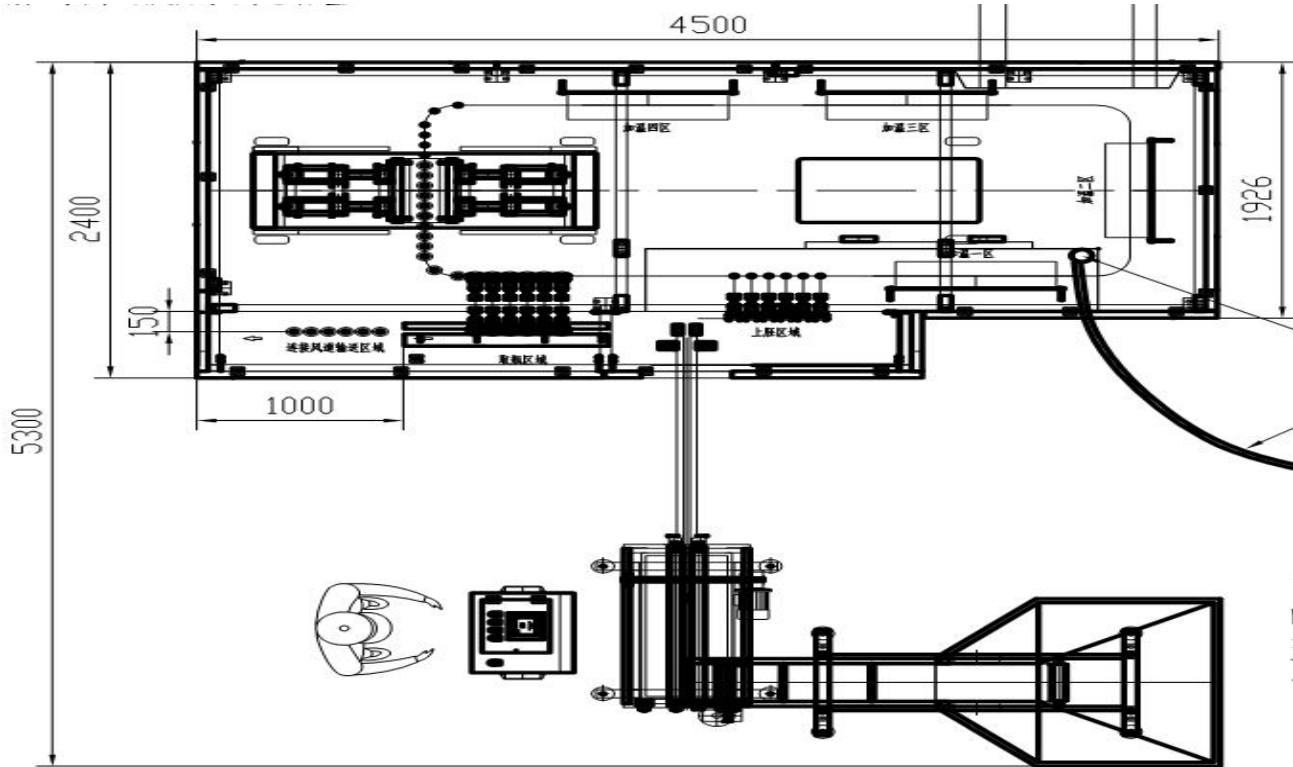
We offer one-year limited guarantee for all products sold and supplied calculated from the date of signing handover agreements. We shall be responsible for repair, spare parts supply and proper relevant charge during the guarantee period if they are caused by our product's quality.

5.6. Delivery time

- 60 days after receiving the deposit and bottle drawings.
- Special delivery time must be confirmed before signing the contract.

5. Machine dimension layout

PET bottle shaping process drawing



6. Contract performance description

6.1 Machine quality standard

In accordance with the requirement of ISO9001 quality system; strictly execute the industry standard and production process.

6.2 Delivery schedule

No.	Item	Complete time
1.	PET瓶成型流程图 Bottle drawing and order place PROCESS OF STRETCHING AND BLOWING PET BOTTLE	2 days after signing contract and receiving the deposit.
2.	Machine production	6 weeks
3.	Machine testing	1 week
4.	Machine FAT and delivery preparation	1 day
5.	Machine delivery	1 day
6.	Machine installation	First week



7.	Water, electricity and air installation(need to cooperate with customer's engineers)	
8.	Machine testing	
9.	Trial production	
10.	Bottle inspection	
11.	Machine acceptance check	Second week
12.	Operator training, key, technical documents handover	

Part B: Automatic Bottle Filling Packing Line

CGF24-24-8 3 In 1 Filling Machine:

1. Technical parameter:

1.1) Capacity:

10,000B/H(600ml); Bottle size: 600ml(10000B/H); 1100ml: 6000-6800B/H, 1.6L: 3300-3800B/H

1.2) Air consumption: 0.8M³/min.; Air pressure: 0.7 Mpa.

1.3) Water consumption for washing bottles: 1.5T/H; Washing pressure: 0.2-0.25Mpa.

1.4) Total capacity of motor: 7KW; 380V, 50Hz.

1.5) Overall dimension(mm): 2900*2200*2600(L*W*H: mm).

1.6) Weight: 4000KG.

1.7) Suitable bottle size: φ50-89, height: 190-320(mm).

2. Structure: (3 In 1: washing-filling-capping)

2.1) Air conveyor: It is equipped with dust-filter, and the strong air in a closed area send the bottle into the filling machine evenly, avoiding the bottle pollution during the transportation.

Picture of air conveyor for reference:



2.2) Washing part (24 washing manipulators):

There are 24 washing manipulators in the bottle washing part, which is made of high-quality SUS304.

The spraying head adopts the fog spraying principle, which can wash the inside bottle completely.

The manipulator turns the bottle 180 degrees on the machine to make the bottle stand on its head. After washing at the spraying station, then, turn 180 degree again, and go to the next process.



2.2) Filling part (24 filling valves):

The machine adopts ring-shaped tank, high-speed, high-precision filling valve body, all filling valve bodies are easy to clean.

The material contacted with liquid made of SUS304.

It adopts the cam lifting principle to complete the filling process, after the filling, through the star wheel into the next procedure.

Picture of filling part for reference:



2.3) Capping part (8 Capping heads):

The capping part adopts the standard German technology.

The cam function realizes the cap-grabbing, covering, screwing procedure.

It adopts the magnetic capping head, which the torque is adjustable, so it is not easy to damage the bottle and the cap.

In addition, the capping head is equipped with a cap-ejector, so as to prevent the empty cap from blocking, then, affecting the production.

The bottle clamping plate adopts the white steel prop, which has a longer service life and is easy to be replaced.

Picture of capping part for reference:



2.4) Cap feeding part:

According to the characteristics of the cap's weight, our team develop a new kind cap-feeding device, called as a waterfall type cap-feeding machine.

Fast cap-feeding, accurate cap-sorting, less noise comparing with the air-feeding cap device and a convex device equipped on the conveying chain plate to prevent the cap from reversing.

It is also equipped with a cap returned device, when the caps are too many, it will be automatically returned to the hopper from the returned port to prevent the cap from blocking.

Picture of cap feeding part for reference:



2.5) Cap sterilized channel

The cap is lifted into the cap-sorter by the conveyor, then the cap is arranged by the cap sorter, finally, slid into the sterilizing liquid spraying guide rail smoothly.

The sterilizing liquid is pumped, to spray all points inside the cap. At the same time, the cap is pushed forward by the water spraying force.

After the sterilizing liquid spraying, it enters into the sterile compressed air spraying area, to blow the sterilizing water inside the cap dry.

Then, the cap is sent into the sterile water spraying area with the sterile compressed air spraying force.

The cap is also sent to the sealed guide rail by the sterile water spraying force, finally sent to the capping device.

Picture of cap sterilized channel:



3.High quality component:

Name of component	Brand
Filling pump/Washing pump	CNP
PLC	MITUSBISHI
Touch screen	WEINVIEW
Frequency converter	MITUSBISHI
Proximity switch	AUTONICS
Photoelectric switch	AUTONICS
Cylinder/Solenoid valve	AIR TAC



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Professional Water Treatment & Bottling Solutions

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AC contactor/Relay	SCHNEIDER
Air switch	SCHNEIDER
Material contacted with liquid	SUS304
Main bearing	HRB
Capping bearing	NSK



Bottle conveyor:





Automatic Sleeve Labeling Machine LD-200B

Sequence	Product Name	Amount	Unit
1	LD-200B Type Trapping Label Machine	1	Set
2	LT-2000 Steam Heating Shrinking Oven	1	Set
3	LT-18KW Steam Generator	1	Set
4	Conveyor	7	Meter

1. Features:

This serial of equipments serves in full auto smart packaging line integrating the functions of delivering bottles, classifying bottles, label sleeving and label shrinking. High speed, precise positioning, saving labor and perfect package are the design tenet of this serial of equipments.

1) Unique cutter head around China, suitable to $\varnothing 30\text{mm} \sim \varnothing 130\text{mm}$ containers, the cutter head is completely free of replacement and adjustment, unique touch man-machine interface, namely automatic positioning after searching out origin which is safe and convenient, and is leading the like products.

2) Label feeding part: dynamic-force synchronous tension controls label feeding, feeding capability: 90m/min., volume label feeding tray: $\varnothing 500\text{mm}$, applicable internal diameter of paper tube: 4', 8', 10', stable tension of label feeding part ensures the precise of the length of label, stable and fast feeding, and the precise of delivering label and casting label.

3) Special hot-wind shrinking oven: High-pressure blower, special hot wind circulating flue helps save energy. The shrinking effect is unmatched, flatten shrinking effect over curve bottles, traditional shrinking ovens are unsatisfactory in shrinking over curve bottles.

Technical Parameters:

1. LD-200B Technical Parameters:

Input Power	3.0KW
Input Voltage	Single phase/220V AC



Production Efficiency	200 bottles/min
Size of Host Machine	2100L×850W×2000H
Applicable Diameter of Bottle Body	35mm~95mm
Applicable Length of Label	30mm~250mm
Applicable Thickness of Label	0.03mm~0.13mm



2. LT-2000 Steam Heating Shrinking Oven

Input Power Supply of Blower	1, 220VAC 0.75KW
Input Power Supply of Steam Generator	380V/50HZ
Working Pressure	≤0.1Mpa
Weight	230Kg
Steam Consumption	10-20Kg/h
Size of Oven Body	1800L×400W×450H
Transporting Speed	0-35m/min



3. LT-18KW Steam Generator

Input power of heater: 18KW

Voltage: 380V

Air pressure: 0.4~0.7Mpa

Steam volume: 3.8~22.8kg/h

Water Container Volume: 28L

Dimension: 630*560*1360(mm/mm/mm)



4. Conveyor



Material: Engineering Plastic-Steel

Configuration List

Item	Model	Qty. (set)	Brand	Origin
PLC	FPX-C60T	1	Panasonic	Japan
Tough Screen	MT6070IH	1	Willen	Taiwan
High-speed fiber-optic sensors	FX-301	1	SUNX	Japan
Photoelectric sensor	CX-421	1	SUNX	Japan
Photoelectric sensor	CX-442	1	SUNX	Japan
Photoelectric sensor	PM-L44	2	SUNX	Japan
Label dosing actuating motor	MHMD082P1U (400W)	1	Panasonic	Japan
Label dosing Servo Driver	MCDDT3520053 (400W)	1	Panasonic	Japan
Cutter actuating motor	MHMD042P1U (400W)	1	Panasonic	Japan
Cutter Servo Driver	MBDDT2210003 (400W)	1	Panasonic	Japan
Bottle Separating AC motor	5IK90GN-YF-5GN7.5K	1	TWT	Taiwan
Bottle Separating transducer	BFV00022DK	1	Panasonic	Japan
Bottle Conveying AC motor	5IK90GN-YFT-5GN15K	1	TWT	Taiwan
Bottle Conveying transducer	BFV00022DK	1	Panasonic	Japan
Gear motor	RV50-20-0.75KW	1	TWT	Taiwan
Conveying transducer	BFV00072GK	1	Panasonic	Japan
Label dosing motor	RV50-15K-180	1	TWT	Taiwan



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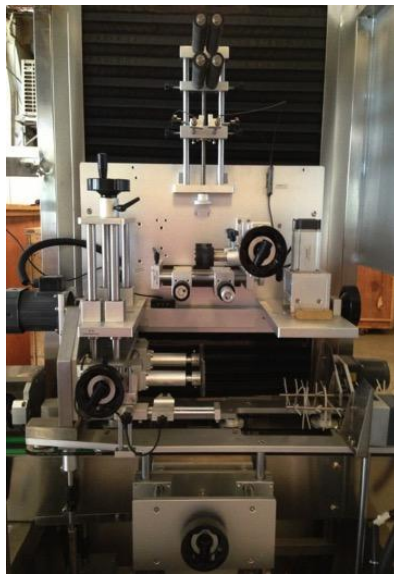
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Label dosing transducer	BFV00022DK	1	Panasonic	Japan
Lifting motor	5IK90GU-CF-5GU30KB	1	TWT	Taiwan
Labeling dosing motor 2	5IK120A-CFT	1	TWT	Taiwan
Brushing motor	4IK25GN-CF-4GN3K	2	TWT	Taiwan
Draught fan motor	RV50-0.75KW-20A	1	TWT	Taiwan
Switch	XB2-BD21	1	Schneider	France
Switch power source	S-50-24	1	MW	Taiwan
AC Connector	LC1-D1810M5C	2	Schneider	France
Disconnecter	D20 2P	1	Schneider	France
Extractor fan	SF11025AT	2	Luann	Shanghai
Three color indicator	LTA-205WJ	1	Shanghai	Shanghai
Socket	10A-220V	1	Shanghai	Shanghai
Single Relay	MY2NJ24VDC	5	Omron	Japan





D5300 Laser Marking Machine



1. Machine Introduction

5300/5303 CO2 laser marking system is the newest product from Guangzhou Sunine laser Technology Co.Ltd. It's specially designed for the industrial product packing. It is the best succedaneum of the ink-jet printer system. The product own the following advantages:

- * Small in size with the integrated touch screen
- * High speed flying marking system
- * Raster font, vector font for choosing
- * No limiting characters in the working area
- * Economical and low maintenance cost

We import advanced foreign technical and parts to keep the machine's competitiveness. Such as generating laser and the lens, which can meet almost marking need. The machine is small size so it takes small space. Widely used in food& beverage ,medicine cosmetics industry and garment industry.



2. Technical Parameter

This machine is made of generator laser, lens, photoelectric sensor, main controller board and power.

5300/5303 can marking under flying status, and can count it when working. Raster font, vector font for choosing. Can non-stopping working for 24 hours.

Item	Model	CO2 5300
Machine general machine	Machine material	Aluminum structures
	Generator laser	Enclosed metal for CO2 laser generator
	Output power	≥30W
	Laser wave length	10.6um/9.3um
	Lens	High precision 2 dimensional scanning system
	Marking speed	≤7000mm/s
	Main control system	Highly integrated motherboard, embedded 7 inch screen
	Operating system	WIN CE
	Cooling system	wind
Laser marking parameter	Focus zoom lens	focal length 130mm
	Marking line type	Raster font, vector font for choosing
	Min.line width	0.03mm
	Repeatability accuracy	0.01mm
	Working area	90mm×90mm or other
	Positioning	Red light positioning and focusing
	Speed	0~100m/min (depends on the material)
	Fonts	Chinese and English, Numbers, such as traditional Chinese standard repertoire
Supporting language	File	BMP/DXF/HPGL/JPEG/PLT
	Code	CODE39、CODE128、CODE126、QR
	Power	220V
	Power Consumption	900W



Other	Net weight	25kg
	Size	730mmX137mmX192mm
	Working environment	The external temperature 0 °C - 45 °C; Humidity of 95% or less; The condensation; No vibration

◆Standards:

GB 7247-87	Classification of laser radiation safety of the product, equipment needs and user guide
GB10320-88	The electrical safety of laser equipment and facilities
ISO 9000-3	International standard software
GB/T12123-89	Designing procedure for selling packages
IEC 536	The classification of electrical and electronic equipment protection against electric shock

Main Configuration Parts list

No.	Second system name	Parts name	Type	QUA./pc	Original Place
1	Laser marking head	lens	1064-3	1	US
		High speed scanning lens		1	Germany
		lens	NJ-110	1	US
2	Generator laser	Generator laser	30W	1	Sunine
3	Red light positioning system			1	
4	Computer and software control system	7 inch touch screen		1	
		Marking soft system			
5	Power	Power switch	S600-48W	1	Taiwan
6	Holder	X, Y holder		1	Sunine
7	optoelectronic switch	Photoelectric sensor		1	US

Automatic Shrink- Wrapping Machine (Model: XY-A400)

1. Scope of Application:

Auto shrink- wrapping machine series are suitable for the package of bottled water ,beverage、 household、 electric appliances、 electrical units、 floor boards、 pottery and so on.

2. Feature:

- 1) It can make package perfect whatever it is without pallet, cartoon, rectangle, round or flat shape.
- 2) It has the advantage of less cost and better appearance.
- 3) Replace film conveniently. It has failure alarm, lock device, reliable running.
- 4) Automatic film feeding and cutting function, and the length of film for feeding and cutting is adjustable.
- 5) Feeding conveyer with frequency transducer control system for ensure reliable feeding.
- 6) With stainless steel heating tube to ensure the high efficiency even heat, not easy to break and easy changing.



7) The whole machine applies super steel and stainless steel, with compact and enduring structure. This new type of wrapping machine is the ideal equipment for beverage filling line.

2. Technical Diameter:

Machine Dimension	5950×4500×1800mm (L*W*H.mm)
Max packed size	600*400*350(L*W*H.mm)
Shrinkage film material	PE、PP、PVC、POF
Shrinkage film thickness	0.03-0.15(mm)
Oven temperature	160 - 250°C
Max output	5-8Bag/Min.
Actual Power	15Kw/H.
Max power consumption	24KW
Voltage	AC 380V/220V,3Phs
Weight	900kg.
Applicable Internal Diameter of Paper Tube	5"~10".

4.Components List:

1. Automatic Film Mantling & Cutting Machine		
Item	Model	Qty
Driving motor	YS5624;90w;220/380;50Hz	2
Gearing head	56B14;RV30;i=10	2
Cylinder	SC63×400	1
Double Shaft Cylinder	TN-φ20×30	1
Heating tube	φ11;L=650mm	1
Filters Rugulators lubricators	GL300-10	1
Timer	JSS48A	3
Temperature Controller	REX-C100	1
pilot light	AD Series	2
Starting switch	LA Series	4
Power Switch	2.1A/24V	1
Electric Relay	MY4NJ;24VDC ; OMRON	5
Solid State Relay	SSR-40DA	1
Proximity Switch	SC1204-N	3
Residual Current Circuit Breaker	C65L-32/4P	2
Pneumatic valve	4V210-08 Airtac	3



Fuse Holder	3A 8A	2
2. Automatic Heat Shinking Machine		
Driving motor	German Join Venture BEIDE motor	1
Turbine Gearbox	WPS60-60A	1
Heating tube	Φ 16*1305 (1200W)	12
Transducer	750w	1
Temperature Controller	REX-C100	1
pilot light	AD Series	1
Starting switch	LA Series	5
Residual Current Circuit Breaker	380V/63A	1
Fuse Base	RT18-32	2
AC contactor	4010/220V;1210/220V	4
Cooling fan	220V,50w	4
Intermediate relay	MY2NJ-220/AC	2

5 Packing Type:

a)300-600ml:Big package: 4×6, 4×5;Small package: 3×4, 3×5.

b) 700-2000ml:Big package: 3×3, 3×4;Small package: 2×2, 2×3.

6. Picture:





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Professional Water Treatment & Bottling Solutions

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