6000~8000BPH 100ML PP INFUSION BOTTLE PMLBGF-06-32-24-24 AUTOMATIC BLOWING FILLING SEALING MACHINE

GUANGDONG GUOZHU INTELLIGENT EQUIPMENT CO., LTD.

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I. Company Introduction:

Guozhu Group Co., Ltd. was founded in 1993. It's a Sino-foreign joint venture high-tech enterprise, which is located in Huanghua Lake Industrial Zone, Fogang County, Qingyuan City of Guangdong Province. The Group takes up about 60,000 square meter of land and its fixed assets are worth more 180 million RMB. The Group is a professional manufacturer that integrates technical R&D, product design and product manufacturing. The Group is particularly specialized in the manufacture of automatic rotary bottle blowing machines, PET/PP bottle automatic linear bottle blowing machines, PET bottle blowing filling capping machines, PP infusion bottle blowing filling sealing machines, precision molds, plastic processing equipment, processing of spare parts, and production of PET, PP products, etc.

Guangdong Guozhu Intelligent Equipment Co., Ltd., Guangdong Guozhu Mould Technology Co., Ltd. and Guangdong Guozhu Packaging Co., Ltd. are subsidiary company under the Guozhu Group. The company is staffed with a number of professional designer, production and sales teams, who are strictly trained. The precision processing equipments are imported from Switzerland, Britain, Japan and other countries, which has perfect machining and heat treatment system, thus to ensure the realization of each design. Precision components must be tested by German Zeiss 3D test device before assembling. The products of the company have gained wide recognition from its clients because they are technologically reliable and economically efficient and durable, and their markets across China and overseas including more than 30 countries and regions.

Our company has established a set of effective management system, and passed the ISO9001 quality system certification in 2003. We always do in accordance with the standard procedures and quality control from raw materials procurement, product design, fabrication, inspection until the after-sales service, thus to ensure that customers use to reliable and durable products, at the same time providing customers with the whole factory and production line design and technical consultation. Our company has three national utility model patents, so our technology is in leading level in this industry.

Quality Guarantee of the Company: Thanks to the company's strong capabilities of design, processing, and testing on finished products, the excellent qualities of the products manufactured are reliably guaranteed.

Corporate Philosophy: The Group holds a belief that it should run factory with guideline of morality and good manners of man can create quality products. It strictly follows its management idea, i.e., "Honesty for Prosperity; Innovation for Excellency; "Moral Decency for Growth". It upholds the creed of "Quality First and Customer Foremost", offering quality products and services to its clients with great sincerity.

Our company through Unigraphics, Pro/ENGINEER, Solidworks, Auto CAD and other computer aided design software system powerful function for PET blowing machine equipment and PET mold development and design; Through advanced Master CAM, Cimatron and other computer programming processing software system, PET blowing machine important parts and PET mold processing.

At present, our company has 20 mold and mechanical design engineers, more than 100 mold and machinery manufacturing technicians, management, sales, procurement, warehouse management and other personnel more than 50 people.

Guozhu mold workshop currently has a lot of advanced processing equipment, testing equipment and auxiliary equipment:

(1) Swiss Sturt universal grinding machine (KC33 universal) 1 set;
(2) British Harting high precision internal and external grinding machine (524 Easy) 1 set
(3) One Swiss "MIKRON" five-axis five-linkage CNC machining center;
(4) 10 imported large CNC boring and milling machining centers;
(5) Import all kinds of medium and small CNC machining centers 16 sets;
(6) Switzerland "AGIE" Japan "MAKINO" CNC 4-axis spark machine 7 sets;
(7) Imported precision CNC lathe 10 sets;
(8) 1 German ZEISS precision 3D Mapper and 1 British precision 3D SCANNERS;
(9) Xintian JT12A-Z 2.5-dimension digital projector 2 sets;
(10) With discharge spark machining machine, wire cutting machine, electric spark punching machine, lathe, milling machine, drilling machine, grinding machine, polishing machine and other general mechanical processing equipment dozens of sets;
(11) With a number of different types of heat treatment equipment: nitriding furnace, quenching furnace, tempering furnace, CNC vacuum treatment furnace, medium and high frequency surface treatment quenching machine and plasma nitriding technology, to ensure the mold and mechanical workpiece of high quality (namely wear resistance, durability, corrosion resistance, high strength).

II. Quotation

System	No.	Name	Description	Qty	Unit / USD	Amount / USD	Remark
吹灌封系统 Blowing Washing Filling Sealing System	1-1	输液瓶吹灌封设备 PP Infusion Bottle Automatic Bottle Blowing Filling Sealing Machine	PMLBGF-06-32-24-24	1set	211300	211300	Hourly Production Capacity: 6000~8000 Bottles (100ml) Servo opening and closing bottle blowing mold Servo stretching
	1-2	吹瓶模具 Blowing Mold (100ml)	6 Cavity	1set			
	1-3	快速换模装置 Mold Exchange Equipment	T-06	1set			
	1-4	回收气装置 Recovery Gas Device	T-06	1set			
	1-5	自动料斗上料装置 Automatic Bottle Preform Hopper Feeding Device	T-06	1set			
	1-6	废瓶剔除装置 Waste Bottle Removal Device	T-06	1set			
	1-7	等离子气体洗瓶装置 Plasma Gas Washing Bottle Device	T-06	1set			
	1-8	灌装装置 Filling Device	T-06	1set			
	1-9	焊盖装置 Sealing Cap Device	T-06	1set			
	1-10	瓶盖自动上料设备 Automatic Bottle Cap Feeding Device	T-06	1set			
	1-11	风冷式冷水机 Air-Cooled Chiller	5HP	1set			
	1-12	风冷式冷水机 Air-Cooled Chiller	10HP	1set			
Total	总价（FOB 深圳蛇口港） Total Price(FOB Shenzhen Shekou Port)					211300	
Total Price	Two Hundred And Eleven Thousand And Three Hundred USD						

交货期 **Deliver Time**： 100 天 100 days（收到预付款和输液瓶设计图纸起）(after receiving advance payment and confirmation of infusion bottle drawings)
报价有效期：30 天
Valid time: 30 days
报价时间：2025 年 7 月 2 日 星期三
Quotation time: Wednesday, July 2nd, 2025

1.价格条款：FOB 深圳蛇口港口

Price term: FOB SHENZHEN SHEKOU PORT

2.交货地点：深圳蛇口港口

Place of delivery: Shenzhen Shekou Port

3.交货方式：深圳蛇口港口交货

Delivery method : delivery from Shekou Port in Shenzhen

4.装运本合同货物的船只，由买方租订舱位。卖方负责货物的一切费用和风险到货物在装运港装运上船为止。

For the goods ordered in this Contract, the carrying vessel shall be arranged by the buyer. The seller shall bear all the charges and risks until the goods are on board the carrying vessel at the loading port.

5.卖方必须在合同规定的装运期限前 10 天内，将合同号码、货物名称、数量、装运口岸及预计货物运达装运口岸日期，以邮件通知买方安排舱位，并同时通知买方在装运港的船舶代理。

The seller must notify the buyer by email 10 days before the shipment period specified in the contract of the contract number, name of goods, quantity, port of shipment and estimated date of arrival of the goods at the port of shipment to arrange shipping space, and at the same time notify the buyer's shipping agent at the port of shipment.

6.买方应在船只受载期 12 天前将船只、预计受载日期、装载数量、合同号码、船舶代理人，以邮件通知卖方。卖方应联系船舶代理人配合船期装船。如买方因故需要变更船只或更改船期时，买方或船舶代理人应及时通知卖方。

The buyer shall notify the seller by email 12 days before the vessel is loaded, including the vessel, expected loading date, loading quantity, contract number, and shipping agent. The seller shall contact the shipping agent to coordinate the loading schedule. If the buyer needs to change the vessel or change the shipping schedule for some reason, the buyer or the shipping agent shall notify the seller in a timely manner.

7.买方所租船只按期到达装运口岸后，如卖方不能按时备货装船，买方因而遭受的一切损失包括空舱费、滞期费等由卖方负担。如船只不能于船舶代理人所确定的受载期内到达，在港口免费堆存期满后第 16 天起发生的仓库租费、保险费由买方负担，但卖方仍负有载货船只到达装运口岸后立即将货物装船的义务并负担费用及风险。前述各种损失均凭原始单据核实支付。

After the vessel chartered by the buyer arrives at the port of shipment on schedule, if the seller fails to prepare the goods for shipment on time, all losses suffered by the buyer, including dead freight and demurrage, shall be borne by the seller. If the vessel fails to arrive within the loading period

determined by the ship agent, the warehouse rental and insurance premiums incurred from the 16th day after the free storage period at the port shall be borne by the buyer, but the seller still has the obligation to load the goods immediately after the carrying vessel arrives at the port of shipment and bears the costs and risks. All the above-mentioned losses shall be verified and paid based on the original documents.

8.卖方提供售前技术支持和售后技术培训。

The seller provides pre-sale technical support and after-sales technical training.

9.买方应严格按照设备操作规程正确使用设备，卖方设备保修期为设备验收合格后 12 个月。

The buyer shall use the equipment correctly in strict accordance with the equipment operating procedures, and the seller's equipment warranty period is 12 months after the equipment is accepted.

10.售后服务：提供机器设备组装过程的视频或工程师在线远程指导，组装相关机器设备服务。

After-sale service: Provide a video of the assembly process of machines or the engineer's online remote guide to assemble machines service.

11.卖方技术人员在买方工厂提供安装、调试、培训、现场指导、安全维护等知识。买方应指派技术人员协助跟踪和接受培训。卖方技术人员往返交通、食宿等费用由买方承担。出国时，买方还应负责卖方工程师的签证费、往返机票费、食宿费，以及每位工程师 150 美元/天的工资。

The seller's technicians provide installation, commissioning, training, on-site guidance, safety maintenance and other knowledge in the buyer' s factory. The buyer shall assign technical personnel to assist in tracking and receiving training. The round-trip transportation, meals and accommodation expenses of the seller's technical personnel shall be borne by the buyer. When going abroad, the buyer shall also be responsible for seller engineer's visa fee, round-trip air ticket, accommodation and meals fee,and also USD150/day for each engineer as salary.

12.包装标准和包装材料的供应和回收：标准包装，不回收包装材料。

Supply and recycling of packaging standards and packaging materials: standard packaging, packaging materials are not recycled.

13.验收标准及方法：按设备说明书及双方达成的共识，验收后如有异议，于验收之日起拾天内提出。

Acceptance standards and methods: According to the equipment manual and the consensus reached by both parties, if there are any objections after acceptance, they shall be raised within ten days from the date of acceptance.

14.结算方式及期限：合同签订 30 天内支付合同总额 30％预付款，设备制造完成后支付合同总额 70％才发货。

Payment Term: Within **30** days after signed the contract, the buyer pay **30%** as deposit; and the rest of **70%** should be paid before shipment。

15.解决合同纠纷的方法：双方友好协商。如果协商不成，需方可以向供应商所在地的法院提起诉讼。

The way to solve the contract dispute: both parties negotiate amicably. If the negotiation fails, they can file a lawsuit in the court where the supplier is located.

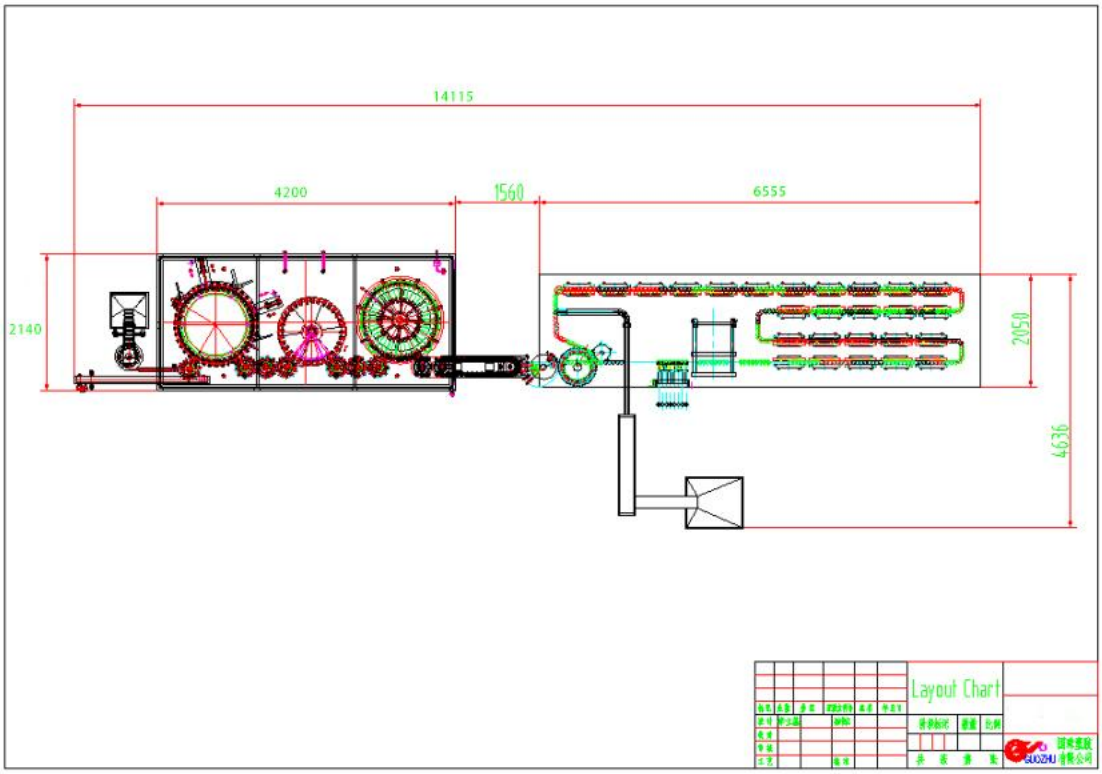
16.本合同经双方代表签字盖章后立即生效。

The contract shall come into force immediately after being signed and sealed by representatives of both parties.

供方 Supplier	需方 Demander
单位名称 Organization： Guangdong Guozhu Intelligent Equipment Co., Ltd	单位名称 Organization：GRUPO ALOAR
单位地址 Address：Huanghuahu Industrial Zone, Fogang County, Qingyuan City, Guangdong Province, China	单位地址 Address：
联系人 Contacts：Amy Pan	联系人 Contacts：Carlos Navarro Orta
COMPANY NAME（公司名称）：GUANGDONG GUOZHU INTELLIGENT EQUIPMENT CO., LTD（广东国珠智能装备有限公司） COMPANY ADD（公司地址）：HUANGHUAHU INDUSTRIAL ZONE, TANGTANG TOWN, FOGANG COUNTY, GUANGDONG PROVINCE（广东省佛冈县汤塘镇黄花湖工业区） PAYEE’S BANK（收款银行）：INDUSTRIAL AND COMMERCIAL BANK OF CHINA, FOGANG BRANCH（中国工商银行股份有限公司佛冈支行）	

SWIFT CODE: ICBKCNBJGDG
ACCOUNT NUMBER（账号）：2018022819200038441
ADD（地址）：120 ZHENXING MIDDLE ROAD SHIJIAO TOWN FOGANG COUNTY QINGYUAN CITY GUANGDONG P.R.CHINA（中国广东省清远市佛冈县石角镇振兴中路 120 号）

1. Infusion Bottle Automatic Bottle Blowing Filling Sealing Machine Layout Drawing 平面布置图



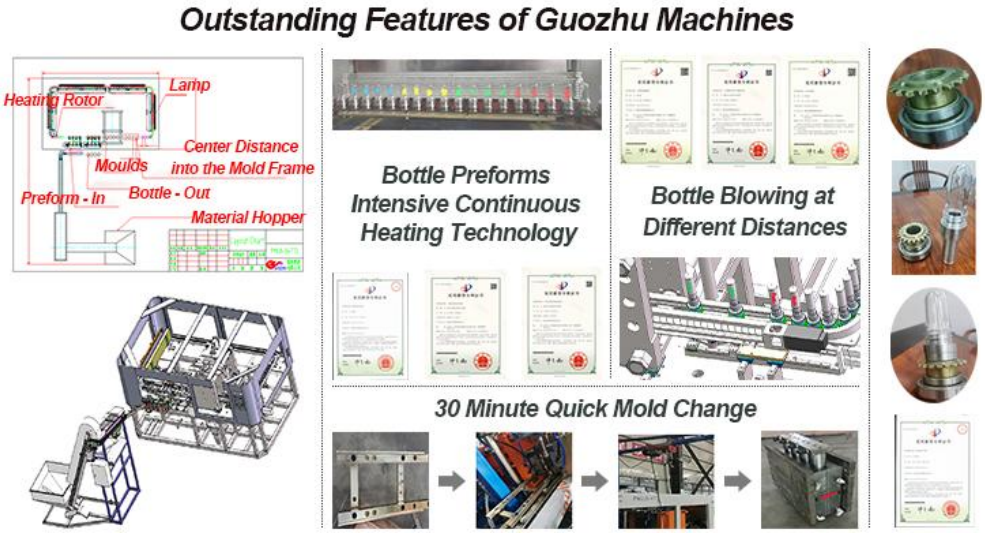
2. PP Infusion Bottle Automatic Bottle Blowing Filling Sealing Machine

A. Main parameters of PMLBGF-06-32-24-24

Blowing Parameters	Max. Volume of Bottle	500ml (6 cavities)		
	Capacity	6000～8000 bottles/hour (100ml)		
	Max. Diameter of Bottle	115mm		
	Bottle Mouth Diameter	≤⌀ 38mm		
	Max. Height of Bottle	240mm		
	Max. Height of Preform	130mm		
	Clamping Stroke	90mm	Thickness of Mold	180mm
	Bottom Mold Stroke	Mechanical synchronization	Layer of Lamp	8
	Rotor Distance	55mm	Heating Rotor Qty.	228
	Service Power	30-35KW	Installed Power	120KW
	Low Pressure	0.8MPa	High Pressure turn Low Pressure	2m³/min
	High Pressure	2.6～3.0Mpa	Air Consumption of High Pressure	6m³/min

	Dimensions of Machine	6555×4636×2050mm	Weight	7T
Washing Filling Sealing Parameters	Washing Station	32 pcs	Filling Station	24 pcs
	Cap Sealing Station	24 pcs	Filling Error	≤ ± 1-2%
	Installed Power	24 KW	Power Supply	380V/50Hz
	Machine Size	4200*2100*2800 mm	Machine Weight	4.8T
	Total Machine Size	14115*4636*2800 mm	Total Machine Weight	11.8T

B. Main Characteristic



(1) The automatic bottle blowing machine is arranged in a single line, occupying a small area.

(2) It has a simple and efficient structure, and maintenance is fast and simple.

(3) It can store 10 sets of blowing parameters.

(4) Guozhu Patent Technology For Continuous Bottle Preform Heating:

Feeding, heating, blowing bottle preform and discharging bottles are carried out at the same time, and the qualified rate of bottles is more than 99.7% .

Note: Bottle Blowing Machine from other suppliers on the market, when there is blowing, the bottle preform in the heated area will briefly stay in one position, resulting in uneven heating of the preform.

(5) Intensive heating of bottle preforms, blowing bottles at different distances. For example, keep the short pitch 55mm while heating and 72mm pitch while blowing.

(6) Use quick mold changer (assemble and disassemble the left, right and bottom mold in the same time), speed up the mold changing and reduce the labor intensity of the workers.

(7) Adopting a servo hinge type booster lock mold structure, with a clamping force of up to 10T, ensuring no mold expansion while saving air source and ensuring the appearance of the finished product.

(8) As soon as the bottle preforms leave the heating area, they quickly enter the blowing area, which effectively saves electric energy.

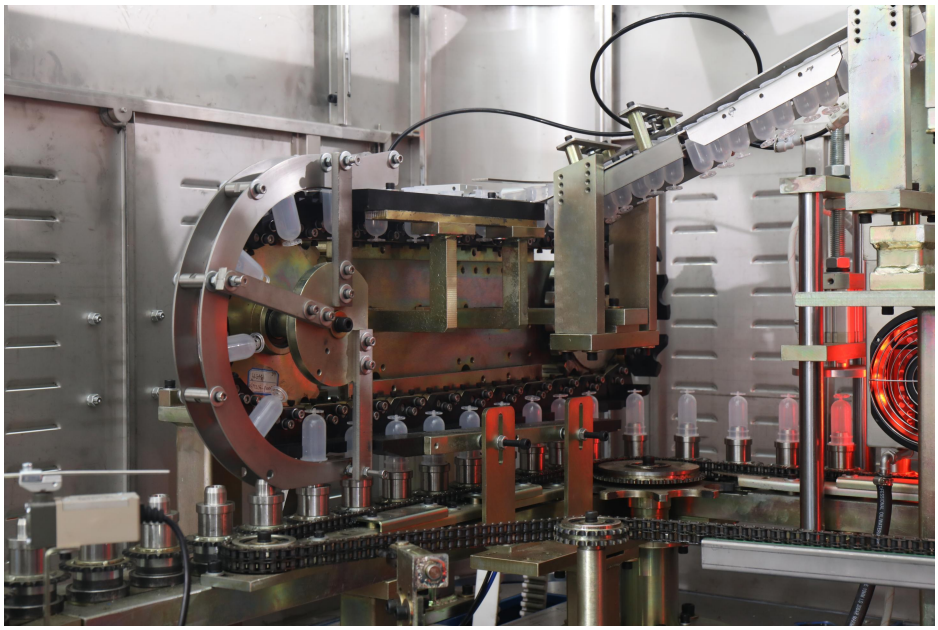
(9) The high-pressure gas used in the blowing process is recovered by the high-pressure gas recovery device and used as the pressure of the pre-blowing bottle, which effectively saves the gas consumption.

(10) Equipped with an exclusive patented heating rotor, the bottle neck of the preform only comes into contact with food grade 304 stainless steel.

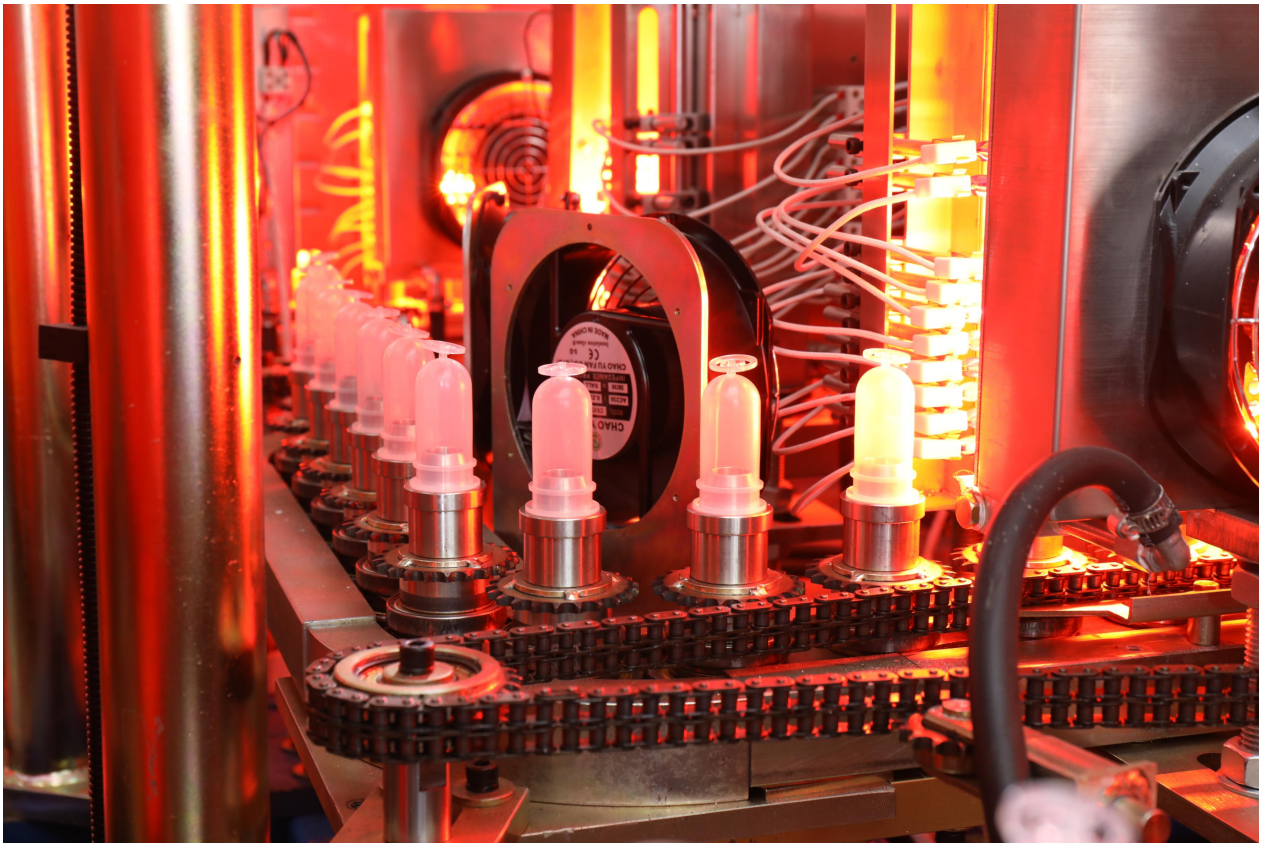
PMLBGF-06-32-24-24 Automatic PP Infusion Bottle Blowing Filling Sealing Machine

(1) The PP Infusion Bottle Automatic Bottle Blowing Filling Sealing Machine is arranged in a single line, occupying a small area.

(2) When entering the bottle preforms (the bottle mouth changes from top to bottom), plasma gas is used for dust removal.

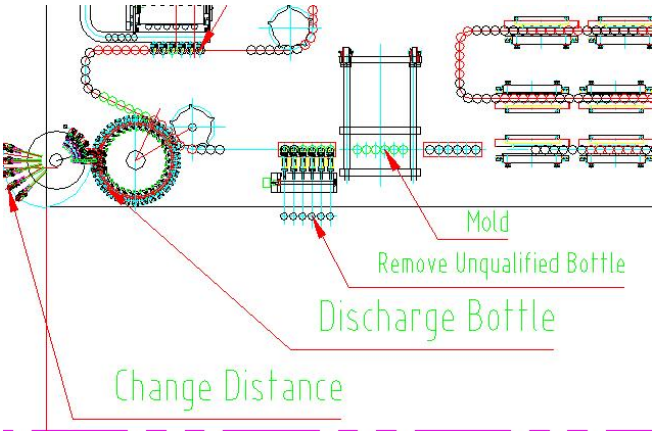


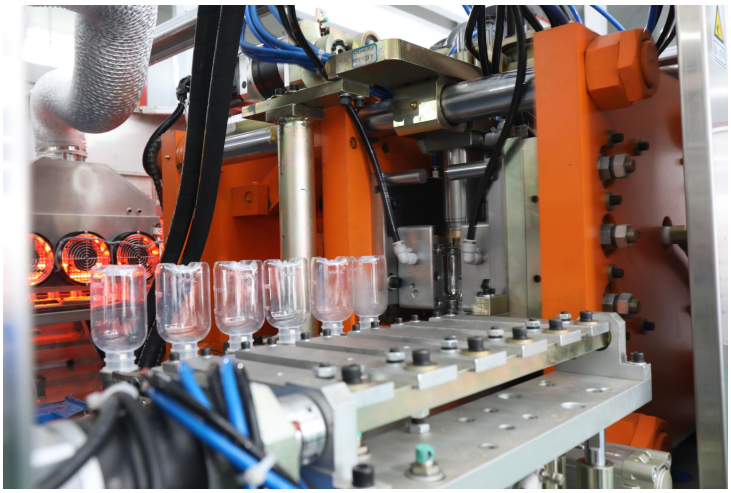
(3) The bottle preforms are heated continuously, which effectively ensures the temperature consistency of the heated bottle preforms.



(4) As soon as the bottle preforms leave the heating area, they quickly enter the blowing area, which effectively saves electric energy.

(5) When the bottle is blown, the pressure of the bottle is automatically detected. If there is abnormal pressure in the bottle when the bottle is blown, the robot hand which is responsible for removing unqualified bottles will remove the abnormal bottles to ensure that the bottles sent to the filling machine are qualified.





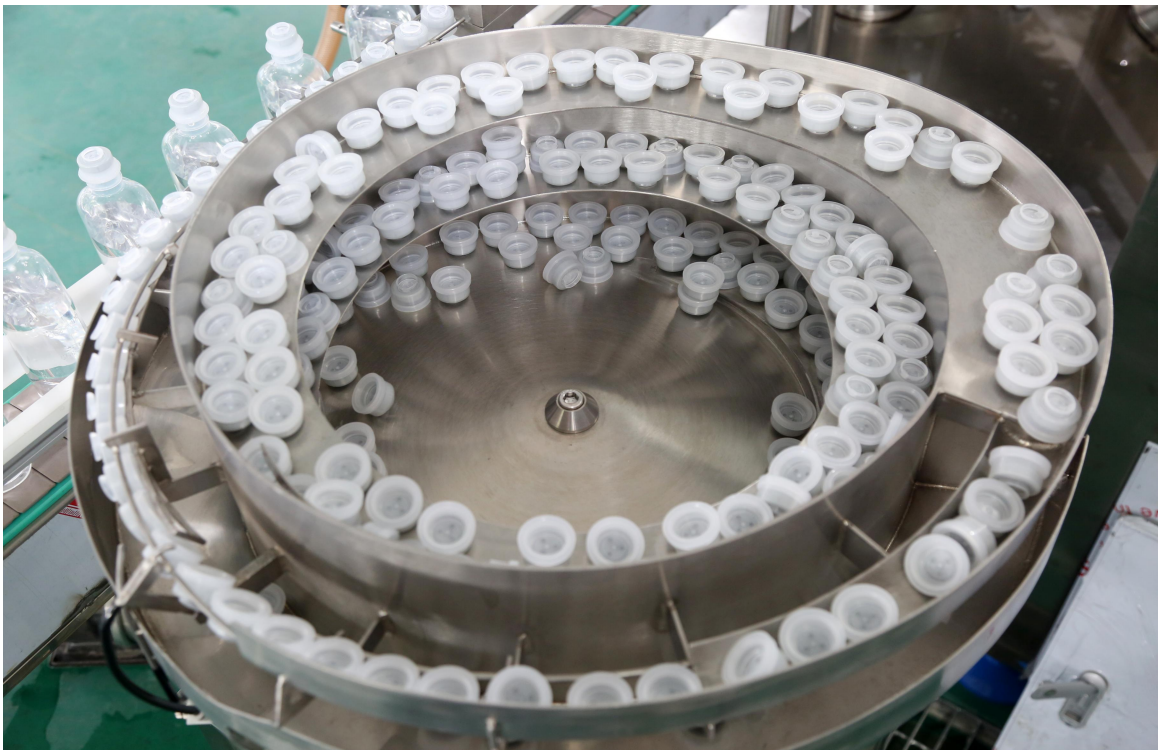
(6) The high-pressure gas used in the blowing process is recovered by the high-pressure gas recovery device and used as the pressure of the pre-blowing bottle, which effectively saves the gas consumption.

(7) The periodic finished bottle becomes a continuous discharge bottle through the CAM structure.

Plasma Gas Washing Bottle Device

Filling Device And Sealing Cap Device

Automatic Bottle Cap Feeding Device



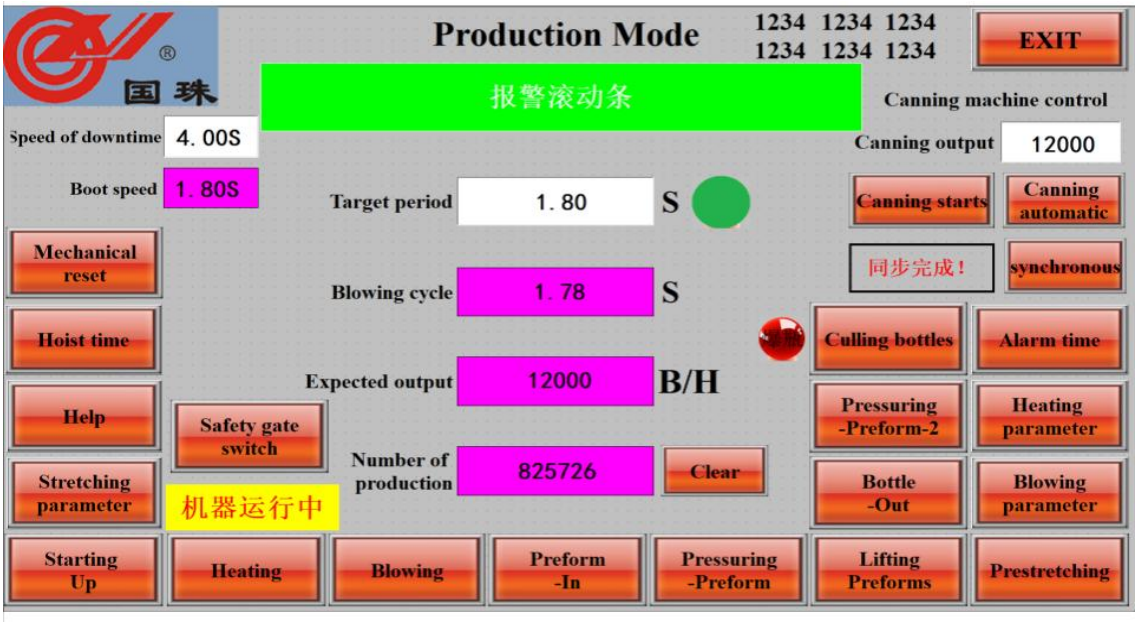
(8) Easy to operate.

a. The bottle blowing machine and filling machine are controlled by the same operating system;

b. The bottle blowing machine and filling machine can be operated and controlled separately;

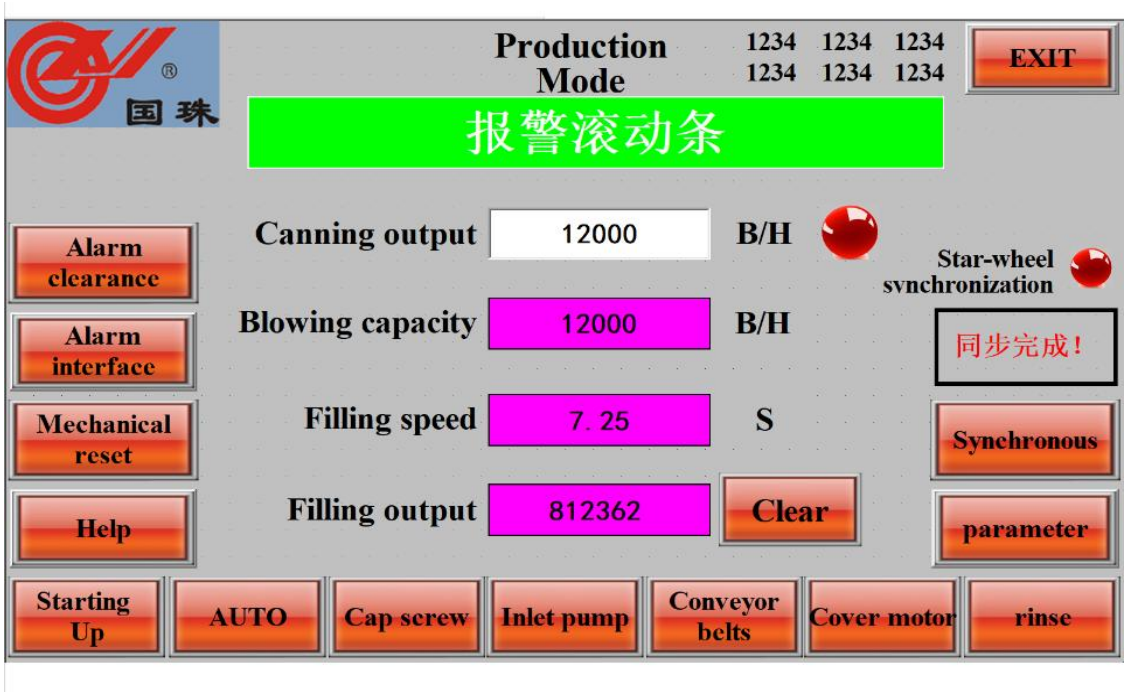
c. Linkage control of bottle blowing machine and filling machine. The operation panel of the bottle blowing machine can control the filling machine, and the operation panel of the filling machine can control the bottle blowing machine.

Bottle Blowing Machine Operation Panel



Note: The above picture of the operation panel is for reference only, and the specific production capacity is subject to the customer's order requirements.

Washing Filling Sealing Machine Operation Panel



Note: The above picture of the operation panel is for reference only, and the specific production capacity is subject to

the customer's order requirements.

C. Spare Part List/set (just for reference)

No.	Specification	Name	Qty.	Remark
1	0302A1001	Rotor Seat	3 pcs	Workpiece
2	0302A1003	Rotor Sprocket Shaft	3 pcs	Workpiece
3	1002A1033	Manipulator Clamp	3 sets	Workpiece
4		Rotor Bearing	5 pcs	Finished Product
5	0902A1001	Sealing Compound	3 pcs	Glue
6	0602A1006	Lamp Tube L=960mm 220V	5 pcs	Finished Product (Based on machine configuration)
7		Photoelectric Switch	1 pc	Finished Product
8	1 inch * 2000	High-pressure Trachea	1 pc	Finished Product
9	1 inch * 1 inch	High Pressure Gas Pipe Connector	2 pcs	Finished Product
10	3/4*2000	Low Pressure Trachea	1 pc	Finished Product
11	3/4*3/4	Low Pressure Gas Pipe Connector	2 pcs	Finished Product
12	25*2.6	O-ring	20 pcs	Finished Product
13	EPC6-02	Quick Connector	5 pcs	Finished Product
14	EPC10-02	Quick Connector	5 pcs	Finished Product
15	8-02	Regulating Joint	3 pcs	Finished Product
16	6-01	Regulating Joint	3 pcs	Finished Product
17	10-02	Regulating Joint	3 pcs	Finished Product
18	6-M5	Regulating Elbow	2 pcs	Finished Product
19	¢6	Tee	2 pcs	Finished Product
20	CSI-G	Magnetic Switch	2 pcs	Finished Product
21	CSI-E	Magnetic Switch	2 pcs	Finished Product
22		Amplifying Plate	1 pc	Finished Product
23	2P	Air Switch	2 pcs	Finished Product
24		Proximity Switch	1 pc	Finished Product
25	4V310	Action Valve	1 pc	Finished Product
26		Tool	1 set	Finished Product
27		Equipment Operation Manual	1 book	
28		Servo System Manual	1 set	
29		Frequency Converter Manual	1 book	

D. Main parts and place of origin

No.	Name	Brand	Origin	Remark
Main Electronic	PLC Controller	Inovance	China (Shenzhen)	
	Servo Driving System	Inovance	China (Shenzhen)	
	Servo Transmission System	Inovance	China	

			(Shenzhen)	
Control System	Human-computer Interface	Inovance	China (Shenzhen)	
	Heating Module	Jiepu	(China) Shandong	
	Heating Lamps	Jieneng	(China) Shanghai	
	Fan	Chaoyu	(China) Dongguan	
	Main Switch	LG	South Korea	
	Circuit Breaker	Siemens	Germany	
	Contactor	Siemens	Germany	
	Photoelectric Switch	OPTES	Japan	
	Frequency Converter	ENC	China (Shenzhen)	
Main Pneumatic System	High Pressure Valve	PARKER	America	
	Exhaust Valve	PARKER	America	
	Action Valve	AIRTAC	China (Taiwan)	
	Triplet	SMC	Japan	
	Feeding Bottle Preforms Flipping Cylinder	SMC	Japan	
	Pressure Reducing Valve	EWO	Germany	
	Cylinder Used for Entering the Bottle Preforms	AIRTAC	China (Taiwan)	

3. Wash-Fill-Seal machine

3.1 Basic Requirement

3.1.1 Equipment Name

IV Solution Plastic bottle Wash-Fill-Seal Machine

3.1.2 Equipment working process

Blowing→Washing PP Infusion Bottle By Plasma Gas→Filling→Sealing→PP Infusion Bottle

3.2 Using environment and energy required

3.2.1 Space: Minimum space: 5700mm*2500mm*2800mm （L*W*H）

3.2.2 Environment tem.:15℃~35℃

3.2.3 Relative humidity:30%~70%

4.2.4 Compressed air pressure:7bar~8bar

3.2.5 Cooling water temperature：≤15℃

3.2.6 Cooling water pressure：2bar~3bar

3.2.7 Compressed air for filling pneumatic valve : ≥6bar

3.2.8 Power：380V ± 10%，3Phase，50Hz

3.3 Equipment purpose

3.3.1 Purpose: Production of IV solution packed by PP infusion bottle
3.3.2 IV Solution
3.3.3 Cleaning method: Plasma gas
3.3.4 Filling method: High level tank
3.3.5 Sealing method: Hot melting sealing

4. Performance Description

4.1 Production capacity of each PP infusion bottle type

Size	Bottles/hour
100ml	6000b/h
250ml	6000b/h
300ml	6000b/h
500ml	6000b/h
1000ml	1000b/h

The above data is based on filling non-bubble products and provide liquid pressure of 2.0bar ~ 4.0bar for test.

The effective yield will be affected because of the operation error, the operation error occurs mainly in start or feed error or other external influences. Equipment manufacturer will not responsible for production speed problem caused by other factors rather than equipment itself.

4.2 Filling accuracy of each PP infusion bottle type

Size	Filling error	Speed in test
100ml	0~2g	6000b/h
250ml	0~5g	6000b/h
300ml	0~5g	6000b/h
500ml	0~7g	6000b/h
1000ml	0~15g	1000b/h

According to no bubble products, filling accuracy will be affected by the operator's error . operation error occurs mainly in setting the filling parameters, the result of excessive filling, SHINVA shall not be liable.

4.3 Production conformity rate of each PP infusion bottle type

Size	Bottle without N_2 gassing	
	Qualified product Ratio	Speed in test
100ml	99%	6000b/h
250ml	99%	6000b/h
300ml	99%	6000b/h
500ml	99%	6000b/h
1000ml	99%	1000b/h

5. Station description

No.	Station and Device List
1.0	Bottle in feed device

2.0	Plasma gas washing station
3.0	Filling station
4.0	Sealing station
5.0	Bottle out device

5.1 Bottle In Feed Device

5.1.1 Adopting the method of connecting to the bottle blowing machine for bottle feeding.
5.1.2 The bottle mouth is conveyed downwards.

5.2 Plasma Gas Washing Station

5.2.1 This workstation cleans the inner surface of the PP infusion bottle wall.
5.2.2 Using high-pressure plasma gas for cleaning.
5.2.3 Clean with the bottle mouth facing downwards.
5.2.4 Equipped with exhaust gas collection and treatment device, automatically extracting exhaust gas.
5.2.5 Totally 32 washing stations.
5.2.6 Provision of discharge fault alarm function.

5.3 Filling station

5.3.1Filling controlled with time &pressure; device consists of liquid tank, pressure stabilizing system, control system, CIP and SIP system.
5.3.2 Use gripper to fix bottle mouth for filling.
5.3.3 PLC timing, magnetic diaphragm valve for control of filling on-off.
5.3.4 Provision of liquid level stabilization system in liquid tank, to maintain level within proper range.
5.3.5 No filling to be performed in case of no bottles.
5.3.6 Provision of CIP and SIP function.
5.3.7 Totally 24 filling stations.

5.4 Sealing station

5.4.1 The bottle mouth and sealing cover in this station is welded through heating and melting.
5.4.2 One vibrator is used to arrange the sealing cover.
5.4.3 Sealing cover is conveyed to heating place through slide rail.
5.4.4 Photoelectric sensor detects sealing cover, lack of sealing cover equipment will alarm automatically.
5.4.5 No capping to be performed in case of no bottles.
5.4.6 Totally 24 sealing stations

5.5 Bottle Out Device

5.5.1 Remove the filled and sealed infusion bottles from the filling station and placed on the conveyor.
5.5.2 Conveyor is chain plate type, driven by a gear motor, speed can be adjusted through frequency control.

5.6 Control System

5.6.1 Composed of one electrical cabinet and one control panel.
5.6.2 The material of body of electrical cabinet and door is SS 304.
5.6.3 The protection grade of electrical cabinet: IP54.
5.6.4 Electrical cabinet inside have lighting device.
5.6.5 PLC: SIEMENS S7-200.
5.6.6 HMI: SIEMENS.

5.6.7 Parameters closely linked with production, such as welding temperature, soldering time and other data can be displayed, set and modify on the touch screen.

5.6.8 When occur operating errors and failures during operation, the device has an automatic shutdown and alarm functions, and the error location is displayed on the touch screen.

5.6.9 The touch screen can count qualified products.

5.6.10 Device parameters program control operation set three levels of password protection, set in the HMI.

5.6.11 Users can store different types of filling medium parameters in the HMI, and can directly invocation.

5.6.12 User can store the welding parameters in the HMI, and can directly invocation.

5.6.13 The device is equipped with an emergency stop switch, are located at the front of the electrical cabinet and the back of the machine frame.

5.6.14 The equipment is equipped with one alarm light.

6.Configuration

No.	Name	Production Company	Country
1.	PLC	SIEMENS	Germany
2.	Touch screen	SIEMENS	Germany
3.	Power supply for plasma wind to remove static electricity	EYENCE	Japan
4.	Plasma nozzle	SHINVA	China
5.	Intermediate relay	SCHNEIDER	France
6.	Magnet switch	CAMOZZI	Italy
7.	Cable	IFM	Germany
8.	Photoelectric switch	AUTONICS	Korea
9.	Safety relay	SCHNEIDER	France
10.	Red light and sound alarm lamp	AUTONICS	Korea
11.	Frequency converter	MITSUBISHI	Japan
12.	Miniature circuit breaker	SCHNEIDER	France
13.	Motor starter	SCHNEIDER	France
14.	Filling diaphragm valve	GEMU	Germany
15.	Fan	NASH	Germany
16.	Gear motor	SEW	Germany
17.	Cylinder	FESTO	Germany

Mold System

A: Introduction of Guozhu Mold

(1) Years of design experience and optimized bottle embryo cooling design can achieve faster cycle and improve production efficiency;

(2) There are advanced vacuum treatment equipment. Vacuum treatment of Mold materials makes the Mold more wear-resistant, corrosion-resistant and easy to maintain. After vacuum treatment of parts, HRC is greater than 45 degrees, and the Mold is more durable.

(3) The parts with international advanced processing equipment have high precision, and the standardized parts of each part of the Mold are interchangeable.

(4) The design of cooling Mold lip improves the stability of the size of the bottle embryo thread.

(5) The Mold base plate is made of high performance Mold base steel, and the forming chamber parts are made of stainless steel S136, which is vacuum treated and wearable.

(6) Self-lubricating guide configuration: Mold lip wear-resistant plate, cavity plate guide sleeve, slide plate guide sleeve are all imported brass inlaid with graphite, clean and oil-free, wear-resistant and durable;

(7) New hot runner structure, more suitable for PP bottle embryo production; parts manufacturing high standards, hot Mold parts materials and imported parts to ensure interchangeability and maintenance, excellent comprehensive performance, to meet industry standards;

B、Material list of main parts of Mold:

	Material Name	Material/Origin/Supplier
1	Mold Shelf plate	Stainless steel
2	Mold lip plate	Stainless steel
3	Mold lip wear-resistant plate	imported high-strength brass containing graphite
4	Cavity plate	Stainless steel
5	Push plate	Stainless steel
6	Core plate	Stainless steel
7	Hot runner plate	Stainless steel
8	Hot runner fixing plate	Stainless steel
9	Hot runner Cylinder plate	Stainless steel

10	Mold core	Stainless steel：S136
11	Mold core seat	Stainless steel：S136
12	Water core	Stainless steel：S136
13	Mold cavity	Stainless steel：S136
14	Mold lip	Stainless steel：S136
15	Valve needle	SKD-61
16	Ejector	Stainless steel
17	Heating ring	Italy
18	Copper nozzles	Guozhu
19	Titanium Alloy Cap	Guozhu
20	Mold Lip Plate Guide Sheath	Imported High-strength Brass Containing Graphite
21	Mold Cavity Guide Plate	Imported High-strength Brass Containing Graphite
22	Heat pipe	C Y
23	Thermocouple	C Y

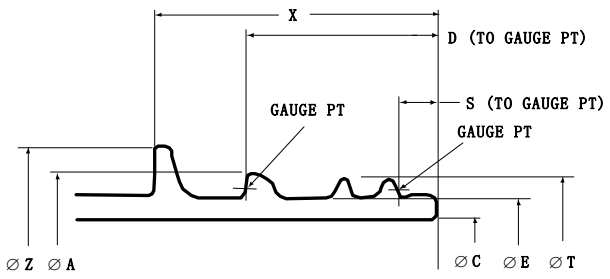
C、List of spare parts for each set of Molds:

	Name	Qty	Unit	Remark
1	Mold Core	1	pcs	Mold Spare Parts
2	Mold Core Seat	1	pcs	Mold Spare Parts
3	Water Core	1	pcs	Mold Spare Parts
4	Mold Cavity	1	pcs	Mold Spare Parts
5	Mold Lip	1	pair	Mold Spare Parts
6	Valve needle	1	pcs	Mold Spare Parts
7	O ring	2 sets of Mold spare parts in each part		Mold Spare Parts
8	Gray Ring	2 sets of Mold spare parts in each part		Mold Spare Parts

9	Fast connector	4	pcs	Mold Spare Parts
10	Time Relay	2	pcs	Mold Spare Parts
11	Push Rod	1	pcs	Mold Spare Parts
12	Tee joint	1	pcs	Mold Spare Parts
13	Muffler	2	pcs	Mold Spare Parts
14	Solid State Relay 5A	2	pcs	Temperature controller Accessories
15	Solid State Relay 40A	2	pcs	Temperature controller Accessories
16	Fuse 5A	5	pcs	Temperature controller Accessories
17	Fuse 32A	5	pcs	Temperature controller Accessories
18	SCR	2	pcs	Temperature controller Accessories
19	Manual Book for temperature controller	1	Book	

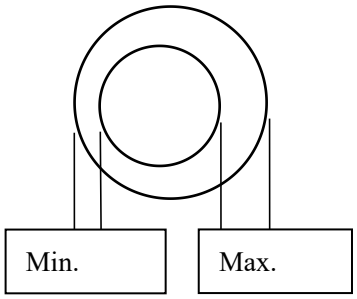
D、**Technical Acceptance Standard**

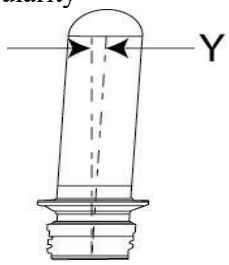
Preform Specifications

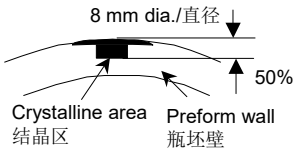
Attribute	**Specification**
1) Thread tolerances	Thread tolerances are as per the International Society of Beverage Technologists “ISBT” standards. If the thread finish type is not within the ISBT standards, tolerances will be based on the Guozhu approved preform drawing. All ISBT standards can be viewed at www.threadspecs.com
2) Thread dimensions inspected	Standard dimensions inspected are as per the drawing shown 
3) Individual preform weight variation from nominal	Nominal weight: Less than 20g Tolerance: ± 0.2 g

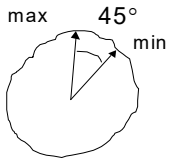
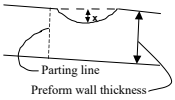
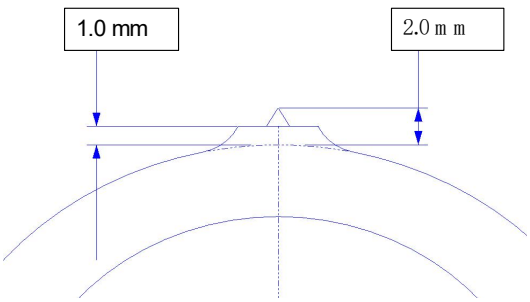
<table>
<tr><th>Attribute</th><th colspan="2">Specification</th></tr>
<tr><td></td><td>20g to 35g</td><td>± 0.3 g</td></tr>
<tr><td></td><td>Greater than 35g to 50g</td><td>± 0.4 g</td></tr>
<tr><td></td><td>Greater than 50g</td><td>± 1 %</td></tr>
<tr><td rowspan="4">4) Maximum allowable weight variation between preforms in one shot.

On an Index system, one shot is defined as a “single” face of the mold.</td><td>Nominal Weight</td><td>Tolerance</td></tr>
<tr><td>Less than 35g</td><td>0.3 g</td></tr>
<tr><td>35g to 50g/35g</td><td>0.4 g</td></tr>
<tr><td>Greater than 50g</td><td>1%</td></tr>
<tr><td>5) Wall thickness variation

 
</td><td colspan="2"><table>
<tr><td>Preform length
瓶坯长度</td><td colspan="2">Preform wall thickness/瓶坯壁厚</td></tr>
<tr><td></td><td>< 3.20mm</td><td>>=3.20mm.</td></tr>
<tr><td><120mm</td><td>0.14mm</td><td>0.12mm</td></tr>
<tr><td>120 - 140mm</td><td>0.17mm</td><td>0.15mm</td></tr>
<tr><td>> 140mm</td><td>0.20mm</td><td>0.18mm</td></tr>
</table>
Wall thickness variation = maximum wall thickness minus minimum wall thickness

Measured on the straight section of the preform body 5mm from both the neck ring and gate insert parting line.</td></tr>
<tr><td>6) Perpendicularity
 

(prior to re-heat)</td><td>Preform Length</td><td>Tolerance</td></tr>
<tr><td></td><td>Up to 120mm</td><td>1.0mm Maximum</td></tr>
<tr><td></td><td>120mm to 200mm</td><td>1.2mm Maximum</td></tr>
<tr><td>7) Overall length
(excluding gate protrusion)</td><td>Preform length</td><td>Tolerance</td></tr>
<tr><td></td><td><= 120mm</td><td>± 0.5mm</td></tr>
<tr><td></td><td>>120 mm</td><td>± 0.5% of perform length</td></tr>
<tr><td>8) Crystallinity
 
</td><td colspan="2">Crystallinity in gate area: to be within 8mm diameter centered on gate tip (for preform base diameter less than 35mm)
Crystallinity through the gate area: to have a depth less than 50% of the bottom wall thickness
Crystallinity in body: not acceptable</td></tr>
</table>

Attribute	Specification	
9) Sink marks 	Thread area (external): - less than 0.5mm deep if up to 3.0mm long, or less than 0.3mm deep if up to 12mm long Preform body: - less than 0.08mm	
10) Parting line deformation (Valid for Index molds only) 	Parting ine deformation “PLD” on preform body : Many factors effect PLD including , preform design, parting line location, processing conditions Wall thickness less than 4.00mm.: Max. 0.20mm Wall thickness 4.0mm and greater: Max. 5% of wall thickness (Wall thickness measured and neck ring/cavity parting line)	
11) Scratches	Preform Body * Not acceptable if: - longer than 20mm - over 10 scratches per cm^2	Thread Area * Not acceptable if: - longer than 5mm / - over 2 scratches per cm^2
12) Mismatch between parting lines (excluding any mismatch designed into the perform)	0.13 mm (maximum)	
13) Flash	0.13mm (maximum)	
14) Bubbles or unmelts	Not acceptable	
15) Short shots/缺料	Not acceptable	
16) Surface contamination	Inner and outer surface to be free of foreign material, e.g. dirt, grease, oil, …	
17) Embedded contamination	Not acceptable	
18) Gate length 	Solid portion of gate vestige must not exceed 1.0mm in length. Any other protrusions (i.e. stringing) must not exceed 2.0mm in length. Dimensions are measured from the tangent point of the gate radius.	
19) Hole in injection point	Less than 1.0mm deep	
20) Cold slugs	Not acceptable	
21) Haze	Not acceptable	

Attribute	Specification
22) Moisture rings	Not acceptable
23) Degraded material	Not acceptable
24) Gate lines	Not acceptable
25) Weld lines top of vent	Not acceptable

Chiller Features			
Air-cooled Chiller Feature			
Item	**Name**	**Specification**	**Feature**
1	**Chiller**	**Model**	5HP
2	**Cool Capacity**	**KW**	13.95KW （water outlet Temperature 7℃， condensing temperature 40℃）
		Kcal/h	18748 （water outlet Temperature 7℃， condensing temperature 40℃）
3	**Power**	**V**	3N-400V-50HZ
4	**Total Power**	**KW**	4.86
5	**Total Current**	**A**	8.7
6	**Compressor**	**Type**	Closed Vortex type
		Cool Input Power （KW）	3.75
7	**Water Pump**	**Type**	Horizontal water pump
		Power/KW	0.75
		Lift	23M
8	**Condenser**	**Type**	Corrugated aluminum fin
		Heat Exchange KW	16.7

9	Evaporator	Type	316LSUS Disk Tube
		Heat Exchange KW	13.95
		Water Tank Capacity /L	/

10	Tube	Cooled Water In/Out	1 inches SUS material (customized)
		Cooled Water In/Out	1 inches SUS material (customized)
11	Micro Computer Controller for Temperature Display	Display Condition	Touch type digital tube Monitor
		Output Strength	GW532A
		Output Strength Option	Relay output
		Temperature Range ℃	5～+25
		Temperature Tolerance ℃	±1.0
12	Alarming Device	Temperature Abnormal	Cycled water temperature too lower and cut off compressor
		Power Phase Inverse	Power phase test to avoid pump and compressor anti-rotate
		Voltage High/Lower Fault	Pressure switch test the pressure condition of coolant
		Compressor Overloaded	Hot relay protect compressor

		Compressor Overheat	Inner protector protect compressor
		Pump Overloaded	Hot relay protect pump
		Coolant Lack	Water flow switch
		Shorten	Air switch
		Coolant	Antifreeze
13	**Outside Size**	**L*W*H（MM）**	1045*610*1260
14	**Total Weight**	**KG**	170

Chiller Features

10HP Air-cooled Chiller Feature

Item	Name	Specification	Feature
1	**Chiller**	**Model**	10HP
2	**Cool capacity**	**KW**	28.01KW（water outlet tem7℃， condensing temperature 40℃）
		Kcal/h	24089（water outlet tem7℃， condensing temperature 40℃）
3	**Power**	**V**	3P-380V-50HZ
4	**Total Power**	**KW**	9.9
5	**Total Current**	**A**	18.8
6	**Compressor**	**Type**	Closed Vortex type
		Cool Input Power（kW）	7.5(3.75*2)
7	**Water Pump**	**Type**	Horizontal water pump
		Power/KW	1.5

		Lift	17M
8	**Condenser**	**Type**	Corrugated aluminum fin
		Heat exchange KW	36
9	**Evaporator**	**Type**	316LSUS Disk Tube
		Heat exchange KW	30
		Water tank capacity /L	/
10	**Tube**	**Cooled water in/out**	1 inches SUS material (customized)
		Cooled water in/out	1inches SUS material (customized)
11	**Micro computer controller for Temperature display**	**Display condition**	Touch type digital tube Monitor
		Output strength	SF306001A
		Output strength option	Relay output
		Temperature range ℃	5～+25
		Temperature tolerance ℃	±1.0
12	**Alarming Device**	**Temperature abnormal**	Cycled water temperature too lower and cut off compressor
		Power phase inverse	Power phase test to avoid pump and compressor anti-rotate
		Voltage High/Lower Fault	Pressure switch test the pressure condition of coolant

		Compressor overloaded	Hot relay protect compressor
		Compressor overheat	Inner protector protect compressor
		Pump overloaded	Hot relay protect pump
		Coolant lack	Water flow switch
		Shorten	Air switch
		Coolant	Antifreeze liquidr
13	**Outside size**	**L*W*H（MM）**	1330*705*1330
14	**Total weight**	**KG**	350

Machine Inside Specification

Water-cooled Type Chiller Specification

Item	Part Name	Model	Qty	Brand
1	**Micro Computer Controller For Temperature Display**	**GW532A**	1 set	Bangpu Taiwan
2	**Pump**	**CP-158**	1 unit	Yuanli Taiwan
3	**Compressor**	**C-SB373H8A**	1unit	Panasonic JP
4	**Fan**	**YWF4D-300S**	2pcs	Weiguang CN
5	**Pressure Switch**	**P830E**	1pcs	Fengshen CN
6	**SUS Disk Tube Evaporator**	**HL-05A**	1 set	Hailing
7	**Shell Type Condenser**	**HL-05AH**	1 set	Hailing
8	**AC Contactor**	**LC1E0610**	1pcs	Schneider
9	**Dry Filter**	**EK-083S**	1pcs	ALCO

10	**Water-proof Cabinet**	**HL-05A**	1pcs	Hailing
11	**Coolant**	**R22**	4KG	Juhua

Note：

(1) Chiller work under rated condition: cooled water input 12℃， environment temperature 35℃， evaporate temperature 2℃， output temperature 7℃， condensing temperature 40℃， and get the cooling capacity;

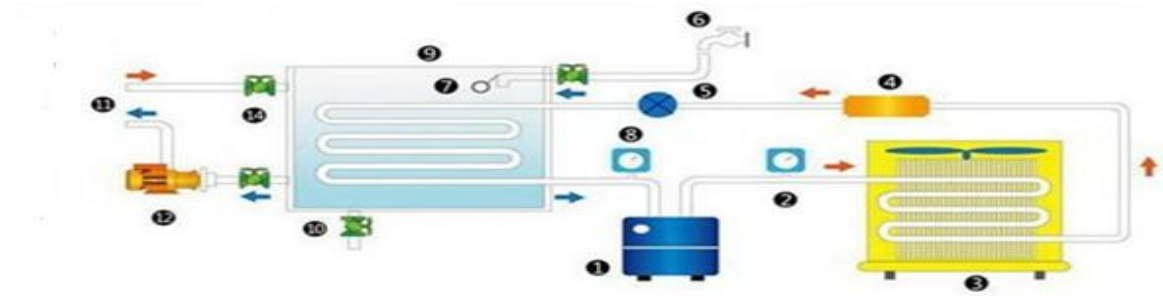
(2) This system applied for standard condition, required clean water as coolant;

(3) Work voltage:3P-380V-50Hz±10%，voltage difference ±2% allowed；

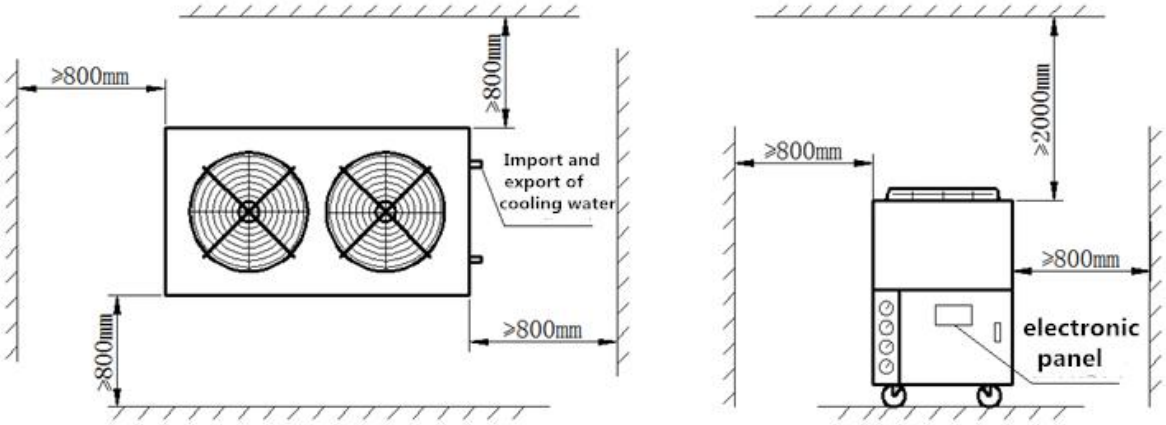
(4) Main machine actual lift equal to water lift minus its inside water head lost （1mH2O=9.8KPa)；

(5) Special water output pressure required need to advice beforehand.

Air-cooled type chiller working principle



① Compressor ② High pressure gauge ③ Condenser
④ Dry filter ⑤ Heat Expansion valve ⑥ Water inlet
⑦ Evaporator ⑧ Low pressure gauge ⑨ Water tank
⑩ Water outlet ⑪ Import and export of cooling water ⑫ Water pump



Air cooled type chiller unit（HL-3A～HL-50A）