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上海晖恒制药机械有限公司

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TECHNOLOGY LEADER INDUSTRY MODEL

PERISE IN PHARMACEUTICAL INDUSTRY





HUIHENG mainly provides the following equipments for domestic and foreign pharmaceutical enterprises:



## About us

**Shanghai Huiheng Pharmaceutical Machinery Co., Ltd.** is a national high-tech enterprise specialized in R&D, manufacturing, sale and after-sale service of pharmaceutical machinery. Headquartered in Shanghai, HUIHENG is shouldering the mission of serving the pharmaceutical industry with advanced technology, and always follows the latest requirements from cGMP, FDA, PICs and other authorities.

HUIHENG mainly engaged in R&D, production, sales and service of aseptic injection filling production line, liquid vials, lyophilized vials, powder vials, small volume ampoules, oral liquid linkage line, PFS (pre-fill system), BFS (Blow- Fill -Sealing), PP bottle IV solution production line, large volume parenteral production line and Non-PVC film soft bag infusion production line etc. The company can provide professional and personalized filling system overall solution for pharmaceutical enterprises with our advanced R&D and design capability.

HUIHENG would adhere to the principle of "Innovation for Life" and apply its innovation expertise and scientific management concept to serve clients all over the world. Under the leadership of a united, enterprising and efficient management team, HUIHENG is making steady progress in a brilliant direction. The company is advancing itself to a higher goal in terms of capital operation, product structure adjustment, new product R&D, quality assurance and service network, so that each of our customers can use our products with confidence and pride.





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## Aseptic Blow-Fill-Seal Machine (BFS)

### Process flow



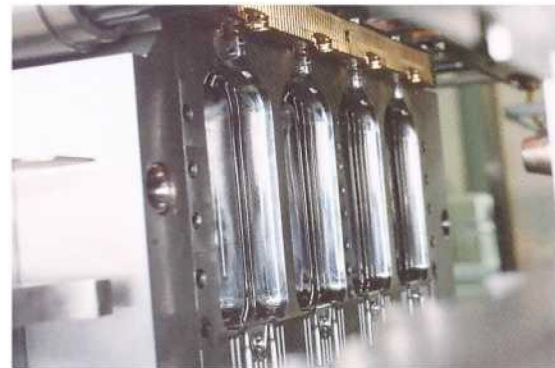
### Main application

Bottle Blowing-Filling-Sealing Machine (BFS) is a aseptic packaging technology. The system can ensure the process such as pharmaceutical grade PP/PE particles extrusion into container, automatic filling and sealing under aseptic condition. It can effectively reduce the pollution of human operation, environmental, material and so on. It meets the requirements of aseptic production process which widely apply to various areas of plastic bottle sterile liquid preparation.

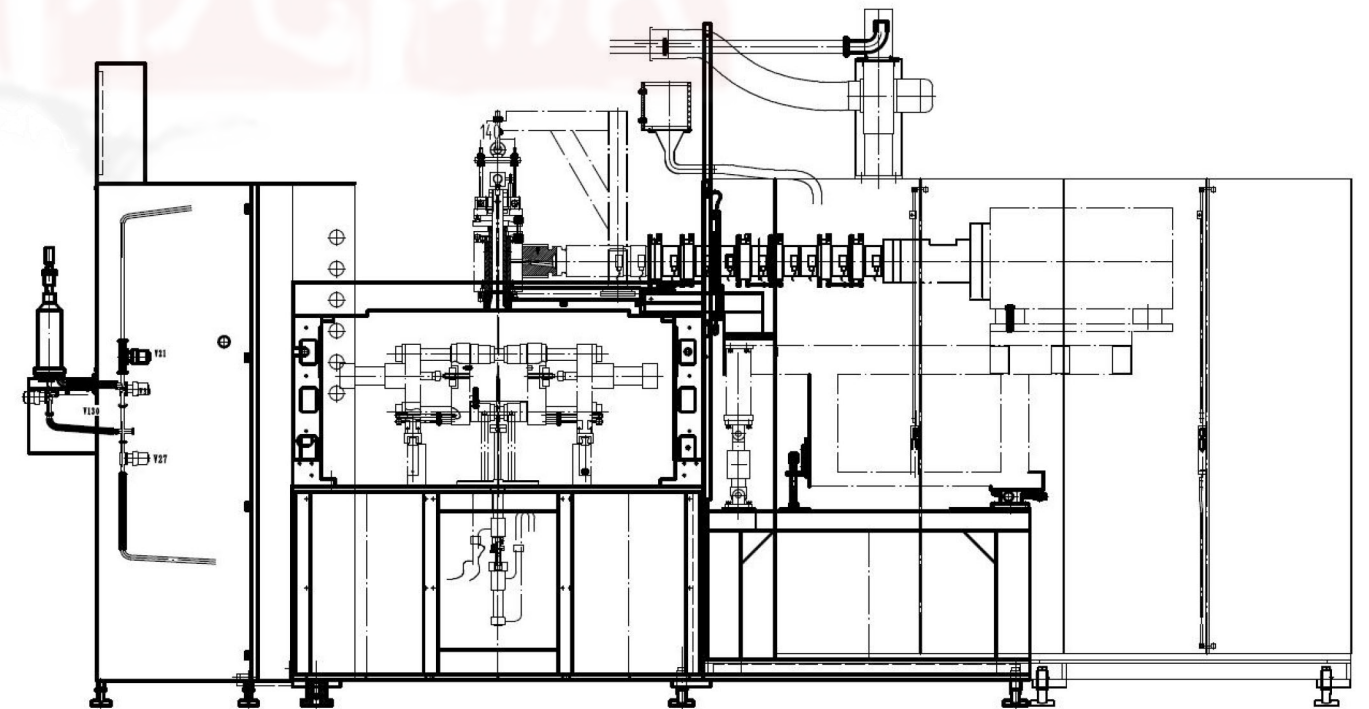
### Product mould



Small Volume Product Mould



LVP Mould



Layout of BFS Machine



Aseptic Bottle Blow-Fill-Seal Machine (BFS)



Classification of containers

Small volume product



Mainly for the production of small volume injection, eye drops, oral liquid, ear drops, and other products. The filling range is 0.1ml-20ml, output depends on the filling quantity and mould cavity number.

Large volume product



Mainly for the production of intravenous injection, cleaning fluid, eye-washing drops, lens care solution, etc. The filling range is 50ml-1 L, output depends on the filling quantity and mould cavity number.

Cutting station

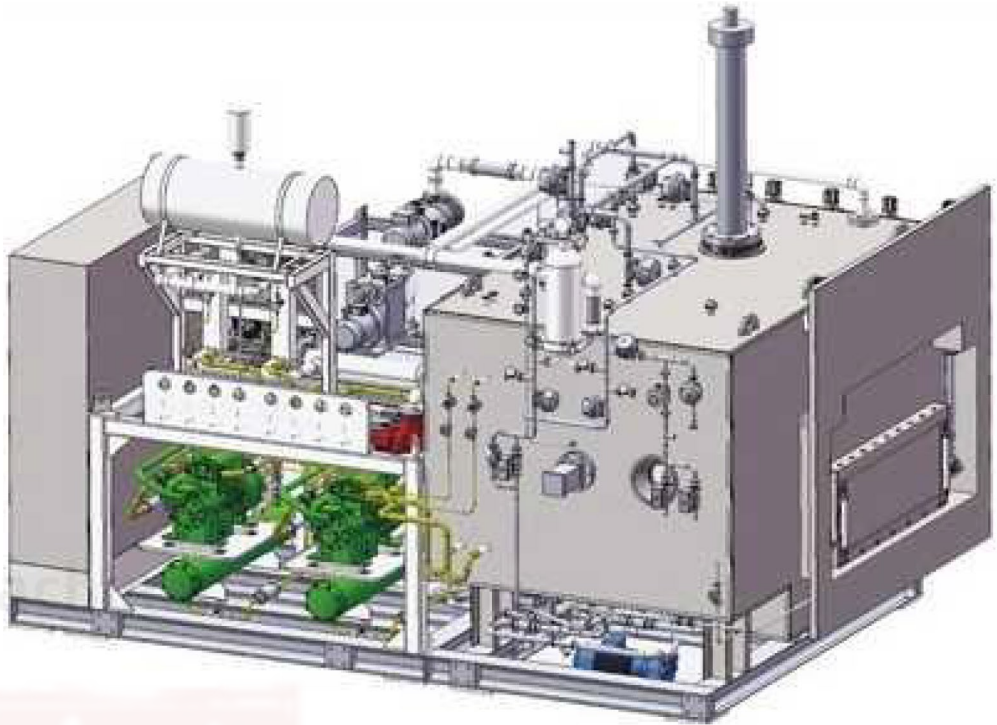
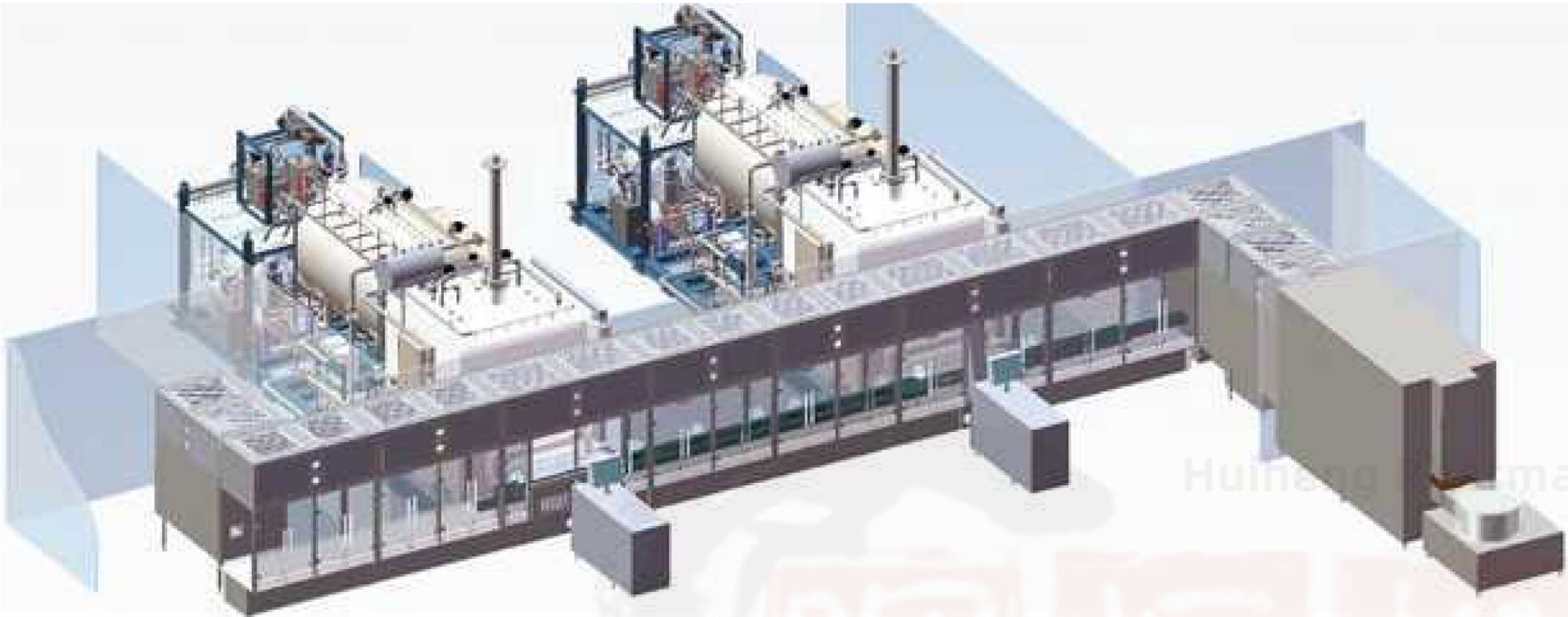


Type Selection

BFS machine type selection reference table			
Type	Cavity Number	Capacity (Bottle per Hour)	Specification
BFS30	30	9000	0.2-5ml
BFS20	20	6000	5-20ml
BFS10	10	3000	10-30ml
BFS8	8	1600	50-500ml
BFS6	6	1200	50-1000ml
BFSD30	Double30	18000	0.2-5ml
BFSD20	Double 20	12000	5-20ml
BFSD10	Double 10	6000	10-30ml
BFSD8	Double 8	3200	50-500ml
BFSD6	Double6	2400	50-1000ml







Main Technical Parameters

Best freeze-drying technology

We have prepared for your choice depending on our experience in pharmaceutical manufacturing and service. We will provide customized products with more flexible and better services for you.

Lyophilizer furtures

- The products fully reflect the stability and reliability of High Fine lyophilizer in LYOHF series. SIP and CIP are optional.
- Organic solvents, high-risk formulation and ATEX are optional.
- The optimized industrial design is easy to clean without dead angles.
- Independent, professional and reliable software development; HMI interface is friendly and practicable.

		LF experimental type	HF productive-oriented										
Shelves loading usable area (m²)		0.5	1	2	5	7.5	10	15	20	25	30	35	40
Water catch capacity (kg)		10	20	40	100	150	200	300	400	500	600	750	800
Ø16 mm vial		1900	4600	10550	20880	32500	41750	61900	85100	100550	125700	150800	174000
Ø22 mm vial		1000	2450	6150	11050	17200	22100	32700	45000	53200	66500	79800	92100
Bulk solution quantity (L)		10	20	40	100	150	200	300	400	500	590	590	800
Shelves size	Width (mm)	300	450	600	900	900	900	1200	1200	1200	1500	1500	1500
	Length (mm)	450	600	900	900	1200	1200	1200	1500	1500	1500	1800	1800
Shelves quantity		4+1	4+1	5+1	6+1	7+1	9+1	10+1	11+1	13+1	13+1	13+1	15+1
Spacing (mm)		80	100-120 (depends on customers requirements)										
Temperature range of shelves (°C)		-55, +70	-55, +70										
Temperature of cold trap (°C)		«•70	G70										
Ultimate vacuum (Pa)		1	1										
Installed power (kW)		8	10	16	33	45	55	70	105	120	144	163	180
Cooling water quantity (m³/h)		3	5	7	11	16	18	25	37	37	42	50	50
Compressed air (MPa)		0.1 (0.5-0.7)	0.1 (0.5-0.7)										
length (mm)		1000	2650	3700	4800	5000	5800	6200	9100	9100	8900	9200	9200
Width (mm)		850	1600	1800	2380	1600	5730	5730	4715	4715	5730	5730	5730
height (mm)		2200	2500	3000	3400	3160	5000	5150	5465	5730	6250	6250	6250
Equipment weight (kg)		440	1500	2200	7000	9000	12000	17000	23800	28000	31000	34000	36000
Pure steam consumption (kg/h)		—	60	100	130	150	200	230	280	320	380	380	450
Pure water/WFI quantity (l/min)		—	60	90	120	150	160	200	230	260	280	280	300



SHH-GXL Series Vial Injection Washing Drying Filling Stoppering Capping Production Line



Description

The SHH-GLX model vial injection washing- drying-filling-stoppering-capping production line is composed of the SHH-QCL series vertical ultrasonic washing machine, SHH-ASMR series depyrogenation tunnel, SHH-KGF series vial injection filling and stoppering machine, and SHH-KGL series capping machine whilst the individual machine can also be used independently. Suitable for production of vial injection of 2-30ml, it can complete morethan 20 work procedures such as ultrasonic bathing,three-time WFI and recycled water washing, three-time compressed air flushing, exterior wall water washing and compressed air flushing, preheating, drying, sterilizing, depyrogenation, cooling, pre-fill gas purging, filling, post-fill gas purging, stoppering and capping.

Main Technical Parameters

Product Model	QCL60+ASMR 620/35+KGF4	QCL60+ASMR 620/43+KGF6	QCL60+ASMR 620/43+KGF8	QCL80+ASMR 620/48+KGF10	QCL120+ASMR 800/55+KGF12	QCL120+ASMR 1250/60+KGF20	QCL80*2+ASMR 1250/60+KGF12*2
Applicable Specifications( ml) (GB standard vial)	2-25						
Number of Filling Heads	4	6	8	10	12	20	24
Production Capacity(pcs/min)	120(2ml)	180(2ml)	200(2ml)	300(2ml)	400(2ml)	500(2ml)	650(2ml)
Qualified Rate of Bottle Washing(%)	≥99						
Breakage Rate of Washing(%)	≤0.1						
Sterilization Temperature(°C)	300-350						
Exhaust Air(m²/h)	3,000		4,100		7,500	8,000-10,000	
Filling Accuracy(%)	≤± 2.5 (Mechanical control of filling pump) ≤± 0.5-1.0 (Servo contro of filling pump)						
Qualified Rate of Stoppering(%)	≥99						
Cleanliness of Laminar Air (Class)	100						
Speed of Vacuum Pumping (m³/h)	10	30	50	60	60	100	120
Capacitance( kw)	66.6	75.6		106.6		212.6	232.6
Power Supply	380V, 50HZ						
Total Weight(kg)	6,300	6,300	7,900		9,400	10,900	14,600
Dimension (LxWxH)(mm)	8,550x2,540x2,330		9,620x2,540x2,330		10,280x3,230x2,360	12,738x2,600x2,620	11,790x5,700x2,620



SHH series of Ampoule Washing Sterilization Filling Sealing Production line



Description

The SHH-ALX model ampoule washing-drying-filling-sealing production line is composed of the SHH-QCL series vertical ultrasonic washing machine, SHH-ASMR series depyrogenation tunnel and SHH-AGF series vertical filling-sealing machine, whilst the three machines can also be used independently. Suitable for production of ampoules of 1-20ml, it can complete more than 20 work procedures such as ultrasonic bathing, three-time WFI and recycled water washing, three-time compressed air flushing, exterior wall water washing and compressed air flushing, preheating, drying, sterilizing, depyrogenation, cooling, pre-fill gas purging, filling, post-fill gas purging, heating and sealing. This production line is a new-type processing line which is researched and developed by Xin Weisheng through its own patented technologies based on its deep understanding of the regulatory requirements and customer

Characterstics

- Vertical ultrasonic washing machine using ultrasonic rough washing, circulating water, WFI and clean compressed air spray and clean the container alternately. Cleaning clarity and visible material detection effect is ideal; it is the most popular cleaning machine in the world today.
- The sterilization tunnel adopts the principle of hot air laminar flow and high temperature sterilization process to preheat, dry, sterilize, remove heat and sterilization process. It is the most popular drying and sterilizing machine in the world.
- Filling and sealing machine adopts step-by-step bottle conveying, positioning filling, wire drawing and sealing. The sealing rate is high. It is the most popular filling and sealing machine in the world.
- The interlocking production line adopts PLC control and touch screen operation, which can be used for linkage control or stand-alone operation. The control runs stably and with high automation.

Main Technical Parameters

Product Model	QCL100+ASMR620 +AGF8/1-20	QCL100+ASMR620 +AGF10/1-20	QCL 120+ASMR620 +AGF12/1-10	QCL 120+ASMR620 +AGFD12/1-20	QCL160+ASMR620 +AGF16/1-3	QCL 160+ASMR620 +AGFD16/1-5
Applicable Specifications(ml) (GB Standard Ampoule)	1-20	1-20	1-10	1-20	1-3	1-5
Capacity(pcs/h)	1-2ml: 22,000	1-2ml: 24,000	1-2ml: 28,000-30,000	12,000-30,000	36,000-42,000	30,000-42,000
	5ml: 16,000	5ml: 18000				
	10ml: 11,000	10ml: 15,000	5-10ml: 18,000-20,000			
	20ml: 6,000	20ml: 8,000				
Clarity (%)	≥99					
Qualified Rate(%)	≥99					
Filling Accuracy(%)	≤±2.5					
Fresh Water Cosumption (cbm/h) and Pressure (mpa)	Consumption: 0.4-1.0 Pressure: 0.2					
Punfied Compressed Air Cosumption (cbm/h) and Pressure (mpa)	Consumption: 30-75 Pressure: 0.15					
Sterilizing Temperature(° C)	300-350					
Exhaust Volume(m³/h)	4,100					
Gas Fuel Consumption (cbm/h) and Pressure (mpa)	Consumption: 1.5-2.5 Pressure: 0.2-0.3					
Oxygen Consumption(cbm/h) and Pressure(mpa)	Consumption: 1.2-1.5 Pressure: 0.2-0.3					
Dimension(LxWxH)(mm)	9,940x2,003x2,445	10,000x2,260x2,455				10,600x2,260x2,455
Weight(kg)	7,500					
Power capacity(kw)	380v 50hz,71					



SHH Series Non-PVC Soft Bag IV Infusion Production Line



Characterstics:

SHH Series Non-PVC film soft bag iv infusion production line is designed and manufactured by Huiheng machinery co., ltd., Which is based on foreign advanced technology, meet with the requirements of domestic and foreign customers. Non-PVC multi-layer co-extruded film bag infusion, with the characteristics of non-toxic, strong compatibility with liquid, water barrier, long guarantee period, can resist 121℃ high temperature sterilization, anti-low temperature, easy to transport and empty bag recycling does not pollute the environment, which is the most popular soft bag infusion production line in the world.



Main Technical Parameters

SHH-RD single hard tube series of soft bag infusion production line

Product model	SHH-RD1200	SHH-RD2500	SHH-RD3500	SHH-RD4500	SHH-RD6000
Capacity (bags)	1200	2500	3500	4500	6000
Infusion bag specification (ml)	100-1000ml	100-2000ml			100-500ml
Bag width of Infusion bag(mm)	120mm,135mm				
Filling accuracy	100ml±2%, 250ml±1.25%, 500ml±0.75%, 1000ml±0.5%, 2000ml±0.3%				
Power supply	380V 50Hz (customized)				
Power capacity(kw)	15	20	25	30	40
Total weight (kg)	2000	5000	6000	8000	10000
Overall dimensions (mm)	2940X2660X2250	6000X2660X2250	6100X2660X2250	7865X2660X2250	9090(10020)X2660X2250

SHH-RDS double hard tube series of soft bag infusion production line

Product model	SHH-RDS1000	SHH-RDS2000	SHH-RDS3000	SHH-RDS4000	SHH-RDS5000
Capacity (bags)	1000	2000	3000	4000	5000
Infusion bag specification (ml)	100-1000ml	100-2000ml			100-500ml
Bag width of Infusion bag(mm)	120mm 135mm				
Filling accuracy	100ml±2% 250ml±1.25% 500ml±0.75% 1000ml±0.5% 2000ml±0.3%				
Power supply	380V 50Hz				
Power capacity (kw)	18	25	30	40	50
Total weight (kg)	2000	5500	6500	8500	11000
Overall dimensions (mm)	2940X2660X2250	6000X2660X2250	6100X2660X2250	7865X2660X2250	9090(10020)X2660X2250



Aseptic PP Bottle Moulding Washing Filling Stoppering Capping Production Line (ISBM)



Description

- 1. SHH-XGF PP Bottle LVP Wash-Fill-Seal Machine has three sections, ionic air washing or ionic air plus water washing, constant pressure filling, and hot melting sealing.
- 2. It can automatically finish the processes of bottle feeding, bottle entering, bottle reversing by manipulator, ionic air reversely blowing and washing, bottle conveying, fixed volume filling, cap sorting, cap feeding, simultaneously heating cap and bottleneck, air eliminating, hot melting sealing, bottle conveying out etc.
- 3. It is mainly applied to the washing, filling and sealing production for PP plastic soft and hard bottle large volume parenteral, like glucose infusion, sodium chloride infusion, sodium chloride and dextrose injection, metronidazole injection etc.

Main Features

- 1. Compact integrated design of wash-fill-seal with smaller production area
- 2. Applicable to any round or flat IV solution bottles with different shapes
- 3. Voice alarm when fault, and machine halt
- 4. PLC control, all operation data can be set, changed and kept on file
- 5. CIP/SIP on line

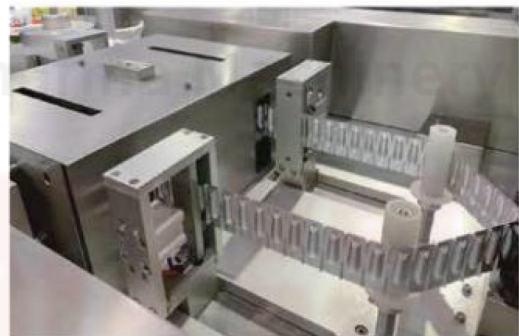
Main Technical Parameters

PP bottle LVP plastic bottle i.v. solution washing filling sealing labeling machine Technical Parameters

Item	Data
Production capacity	2000~20000 bottles/hour
Specification	50~1000ml round or other shape PP bottle
Bottle washing	ionic air washing, or ionic air and water washing
Main filling medium	Liquid such as large volume infusion
Filling error	±1%
Liquid filling temperature and pressure	40~55℃ 0.6~2kg/cm²
CIP/ SIP	125 ℃--30 min
Air consumption (clean air)	Pressure: 0.6~0.8Mpa 180(120)m³/h
Cooling water	250L/h, 15~20℃
Noise	max.75dB
Electric capacity	18~35KW



SHH Series Automatic Suppository Production Line



Description

Automatic suppository production line is suitable for the production of special shapes of slugs such as bullet shape, torpedo shape and duckbill shape, which can meet the production of suppositories of various shapes. (Make a mold according to the sample or requirement)



From the beginning of the automatic suppository shell molding, to the filling station of the liquid medicine, the reciprocating cooling setting (liquid conversion solid state), the continuous sealing, the batch number, the finished product cutting (the number of cutting particles is arbitrarily set on the touch screen, 1-10 Free cutting)

Main Technical Parameters

Name	Continuous fully automatic suppository production line		
Capacity	1,000—30,000 pcs/h	single dosage	0.5—5ml
Dosage Allowed	< ±2%	packaging film	PVC\PE Thickness:0.15-0.18mm
Stirring tank capacity	70L	work pressure	More than≥0.7Mpa
Air consumption	1.6m³/min	water consumption	50kg /h(recycle use)
Voltage	3p 380 V(customized)	Total power	7.5KW — 20 KW
Center distance	17.4mm	weight	2000kg — 3000kg
Shape	The bullet,torpedoes,duck bill and other various shapes		
Application	Synthetic fatty acid glycerides, glycerin,gelation and polyethylene glycol,etc		
Overall Size	Different models can be reasonably arranged according to workshop design		



SHH-CX MODEL LARGE VOLUME LIQUID FILLING PRODUCTION LINE



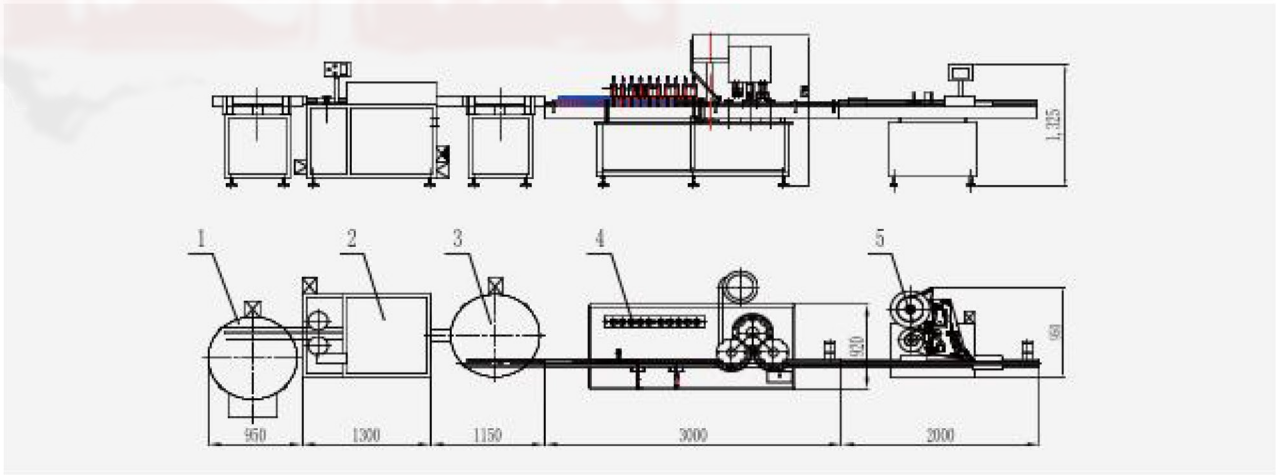
Description

The SHH-CX model large volume liquid production line is composed of the unscrambler (turntable), rotary type washing machine, depyrogenation tunnel (for glass container), ultrasonic washing machine, filling and stoppering machine, capping machine and labeling machine. This production line can be used to produce 30-500ml large volume infusion/ parenteral/ syrup in glass or plastic containers.

Performance Fertures

The SHH -CX model production line is suitable for filling-stoppering and sealing for containers of 30-500ml, and can be used for both glass and plastic containers with change-over format parts. This production line is featured by wide use and convenient adjustment. The production capacity of this compact line is affected by the size and specification of the container and the viscosity of the injection material.

Installation Layout



Main Technical Parameter

Production Capacity(pcs/min)	80-120 (8-nozzle filling, 6-head capping) 40-60 (4-nozzle filling, single-head capping)
Cleanliness of Washing (%)	>99
Filling Accuracy (%)	0.2
Qualified Rate of Stoppering (%)	>98
Qualified Rate of Capping (%)	>98
Power (kw)	11
Overall Dimensions (mm)	9,740 x 1,470 x 1,785

No.	Machine	Supply	Power (kw)	Weight (kg)
1	Turntable	220V,50Hz	0.25	100
2	Drum Type Washer	380V,50Hz	1	500
3	Turntable	220V,50Hz	0.25	100
4	Filling and Capping Machine	380V,50Hz	2	800
5	Vertical Labeling Machine	220V,50Hz	2	200



