

Full-automatic Suppository Production Line

1. Technical performance introduction

introduction of equipment performance

working principle of the machine

The SJ-1 automatic suppository filling production line has a stable and efficient manufacturing process, filling, freezing, sealing and other production processes to complete the whole process, and the production capacity is 1,200-1,800 grain/hour.

Process flow

It will be rolled into the forming area by the clamping mechanism. The mold will be heated by the preheating mold, the mold, the mold, the blow mold and the bubble forming.

Filling

And one-time molding suppository for embedded type filling, filling accuracy $\pm 2\%$, filling material barrel has electric heating insulation system, the top is equipped with a uniform mixing machine in order to make drugs, drug by high precision in VAT filling pump into the filling head, a drug through the other end of the cycle to rest after filling material barrel filling again next time.

Cooling design

The suppository of the whole drainage is entered into the cooling box, and the cooling box is equipped with a cold water unit.

Shearing

After being cooled, the solid suppository enters the sealing zone: preheating mold (preheating), sealing mould (seal), marking mould (batch number), The triangle knife will be cutting suppository top edge (cutting edge), hob (top), counting shear.

2. Function description

1.SJ-1L Full-automatic Suppository Production Line is suitable for the production of special shape such as bullet head, torpedo shape and duck bill, to meet the production of your suppository. (according to the specifications of your specifications)

2. The equipment adopts PLC programmable control and man-machine interface operation, easy operation, convenient adjustment, accurate temperature control and smooth operation.

3. The temperature sensor and microcomputer control system are used to realize high precision thermostatic control.

3. The liquid storage tank is made of 316L stainless steel, with proper volume, heat preservation and heating function, and accurate temperature control; The tank is equipped with a mixing device to ensure the homogeneity of the liquid in the VAT at any time. The reservoir can be connected with the filling mechanism through the pipe, and the liquid can be kept in circulation to ensure the fluidity of the liquid and satisfy the demand of filling.

4.The insertion type linear perfusion mechanism can be used to locate accurate, not dropping, and not hanging wall; The single-grain measurement is 0.5-5g and the filling error is plus or minus 2%.

5. Continuous cooling design, the post-infusion suppository shell can be fully cooled and the liquid solid transformation is realized.

3.Manufacturing Principle

SJ-1L automatic suppository filling production line is welded flat, with no edge, slag and splash.

The whole machine is treated with reliable rust. The surface of the equipment is 304 stainless steel. It is smooth and easy to clean.

Components, accessories and motors and so on should adopt domestic and foreign premium brands.

Ensure the appearance of the equipment and smooth operation.

Safety of Equipment

The machine has sufficient safety equipment to guarantee that operators will not be harmed in the operation.

Advantage of Equipment

1. High Accuracy of Filling

The injection pump body is processed by special process, so that the sealing performance between the piston and the pump body is better, and the infusion volume is more accurate. The dosages can be fine-tuned.

2. Combination structure of triangle knife and dot line knife

Make the both of triangle and the dotted line knives completely coincide, make the bolted shell achieve the easy tear effect.

3. Filling parts without sticking material on the pump

The equipment filling pump has high precision, good sealing effect, smooth inner wall and good stability, so as to achieve the long-term operation without hanging wall phenomenon.

4. Stirring tank speed adjusting system

Because of the different viscosity of the drug matrix, the mixing effect cannot be fixed and the drug can be mixed before the filling, which can affect the drug content of the finished product.

5. Fractional cooling system

The cooling system adopts the latest grading cooling technology, which can be cooled and solved the phenomenon of the edge of cooled material drops and fracture when the medicine is tearing apart.

6. PLC Examine system

The on-line monitoring function of PLC can be used to detect and alarm the fault self-check.

7. Filling parts equipped with anti-static system

Note: by filling parts molding shell before if not including the equipment because of trace drug when filling in the flowing area close to the bolt shell under the action of electrostatic force along the shell wall climbing a short level which could reach the sealing parts of the bolt, thus will affect the back of the sealing quality.

8. Filling parts without sticking material on the pump

The equipment has high precision and good stability, so it can run without wall for a long time.

9. Easy operation

Control station height reasonable design, machine operation is simple.

4.Parameters list of SJ-1L

Commodity	Full automatic suppository production line	Model	SJ-1L
Output	1,200—1, 800 pcs/h	single dosage	0.5—5g
Dosage allowed	<±2%	Packaging Film	PVC/PE (thickness0.15-0.18mm)
Stirring tank capacity	20L	Air pressure	≥0.6Mpa
Air consumption/min	1.2m ³	Water consumption/h	50kg (recycling)
Working voltage	3 phase 380V	total power	4KW
Adopt forming shapes	Bullet, torpedo and duck shapes and other shapes	Machine Weight	500KG
Adapt Material	Synthetic fatty acid glycerol, glycerin gelatin, polyethylene glycol etc	Each distance of suppository	17.4mm
Overall dimensions	L2,300mm×W1200mm×H1,800mm		

Configuration list of SJ-1L

Forming part	PVC-PE Put film plate (supporting the brake cylinder)	Pneumatic components brand:AirTAC Cylinder runnin quality sealing ring, durable and wear - resistant.g stable, adoptHigh
	Film-oriented device	
	Forming mold(1)	
	Sandwich film running device (supporting cylinder 1pc)	
	Forming device (supporting cylinders)	
	Pressed forming device (supporting cylinder 1pc)	
	Blowing devic	
	Forming part box body (content internal frame)	material: aluminum、 stainless steel
Organic glass cover	homemade	

Structure	Item	Comment
Filling part	Filling machine (pneumatic) adjustment means (step)	Pneumatic components brand:AirTAC Filling servo adjustment, Simple, no wall, filling volume stable
	Filling pump head (1 - note the plug type)	
	The filling is individually fine-tuned	
	20L Material barrel (stirring motor)	
	Material barrel cycle pump (supporting cylinder 1pc)	
	Filling part box vessel (content internal frame)	material: aluminum、stainless steel
	Organic glass cover	homemade

Structure	Item	Comment
Cooling part	Cooling water machine group (The user purchased)	/
	Cooling wind machine	homemade
) Suppository stepping with belt system (pneumatic)	Homemade Patent technology
	Cooling part box body (content internal frame)	material: aluminum、stainless steel
	Organic glass cover	homemade
Sealing part	Sealing preheat device	Pneumatic components brand: AirTAC Lot Clear reliable, accurate and reliable
	Heating seal device	
	Production date stamping (supporting three sets cylinder)	
	Cut edge rolling knife	
	Triangle knife knife \ dotted line structure (supporting cylinders)	Positioning accuracy, guarantee the dotted and triangular opening on the same line
	The belt-cutting transmission device	Stepper motor
	Seal part box body (content internal frame)	material: aluminum、stainless steel
	Organic glass cover	homemade

3.8 Electric-control parts configuration list

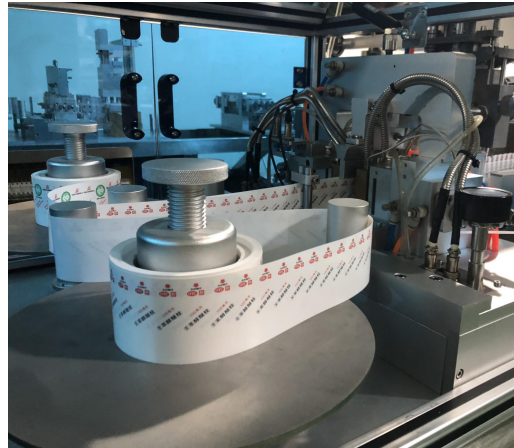
Number	Commodity	Notice
1	Programmable controller	Siemens
2	The man-machine interface	Siemens
3	Low voltage electrical appliances	Schneider
4	Temperature controller (multi-channel temperature controller)	Yudian
5	Electromagnetic valve gas source treatment	Airtac (Taiwan)
6	Photoelectric switch/proximity switch	Panasonic /Suodilong
7	Alarm device (alarm lamp)	Made in China

4, Equipment pictures and details

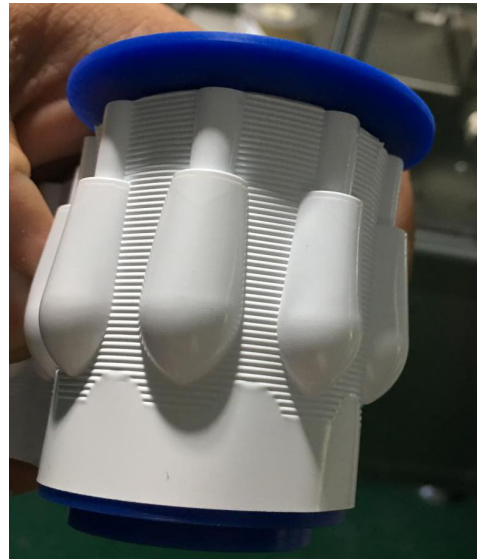




The finished shear

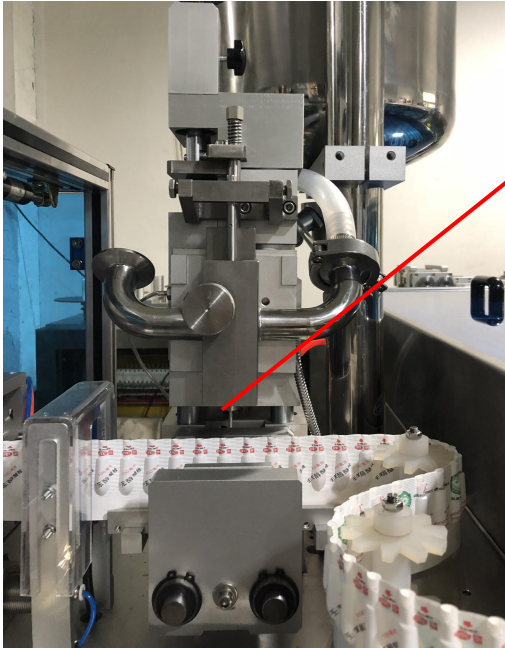


shell molding

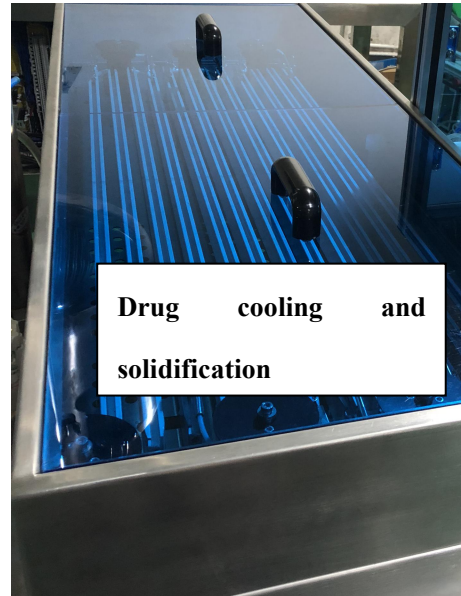


《Patent technology》

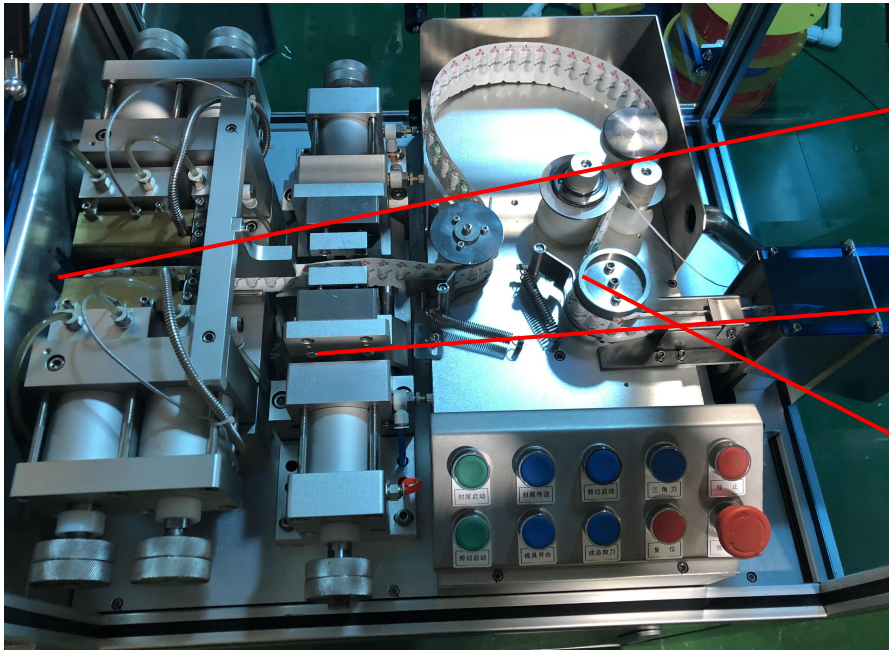
The cooling system runner is turned to the neck of the suppository shell without damaging the bubble or sticking the bolt. The regulating wheel has the function of manual synchronous adjustment. Each wheel is an active wheel and can be independently adjusted.



Liquid filling



Drug cooling and solidification



Seal and print batch number

Triangular and dotted line incisions

Fix the top