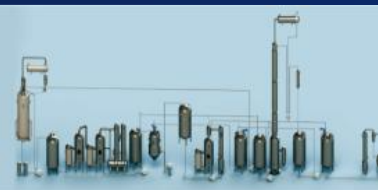


GZPK-45/55/75 Automatic High
Speed Rotary Tablet Press Machine

产品介绍

Products



全产品链

Full product chain



自动化

Automatization



数字化

Digitize



智能化

Intelligent



大健康产业

Big Health Industry

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Part 1

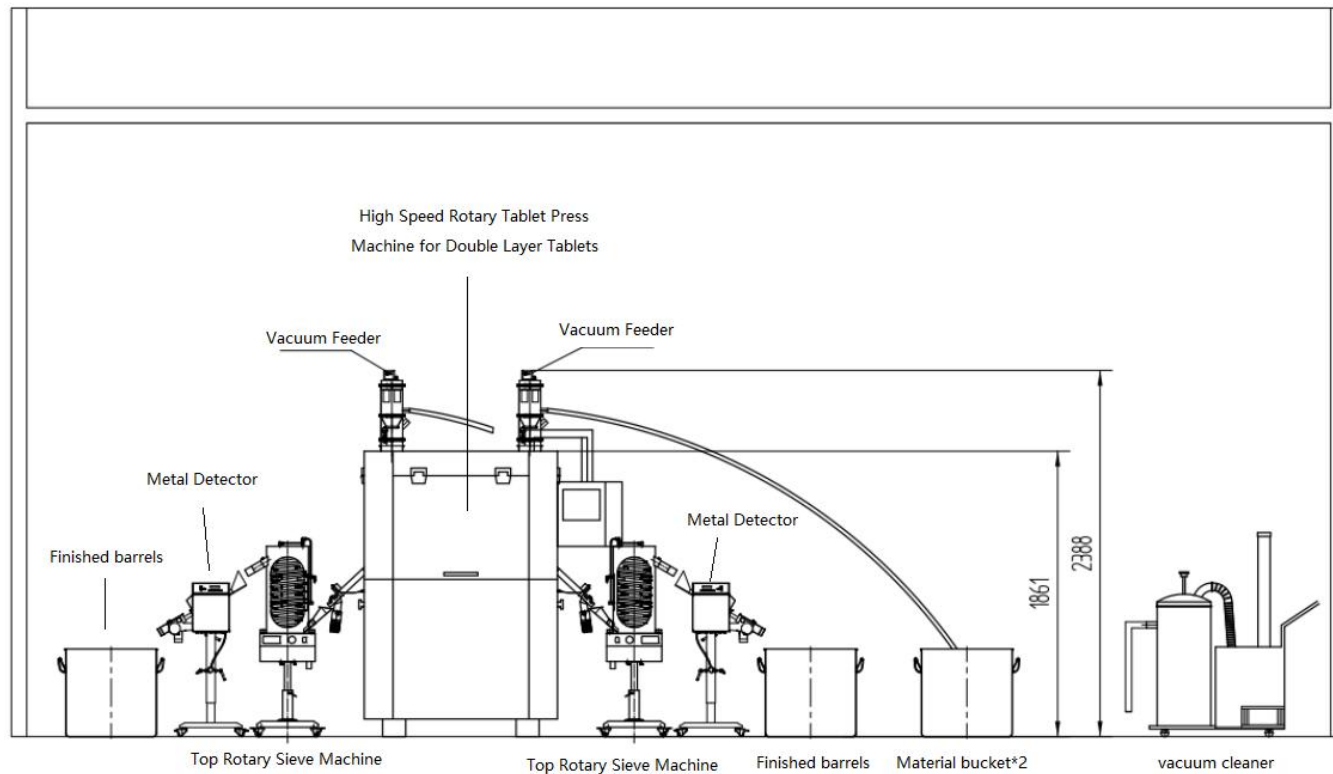


Product overview

1.1 Product overview

Model GZPK-660 Double Discharge High Speed Rotary Tablet Press is a product of British Manistee Company. After continuous technological innovation and improvement, it concentrates on the technical characteristics of the domestic automatic high speed rotary tablet press, featuring higher degree of automation, better operability, faster production speed, stronger stability performance and lower working noise. Its technology is located in the domestic leading level.

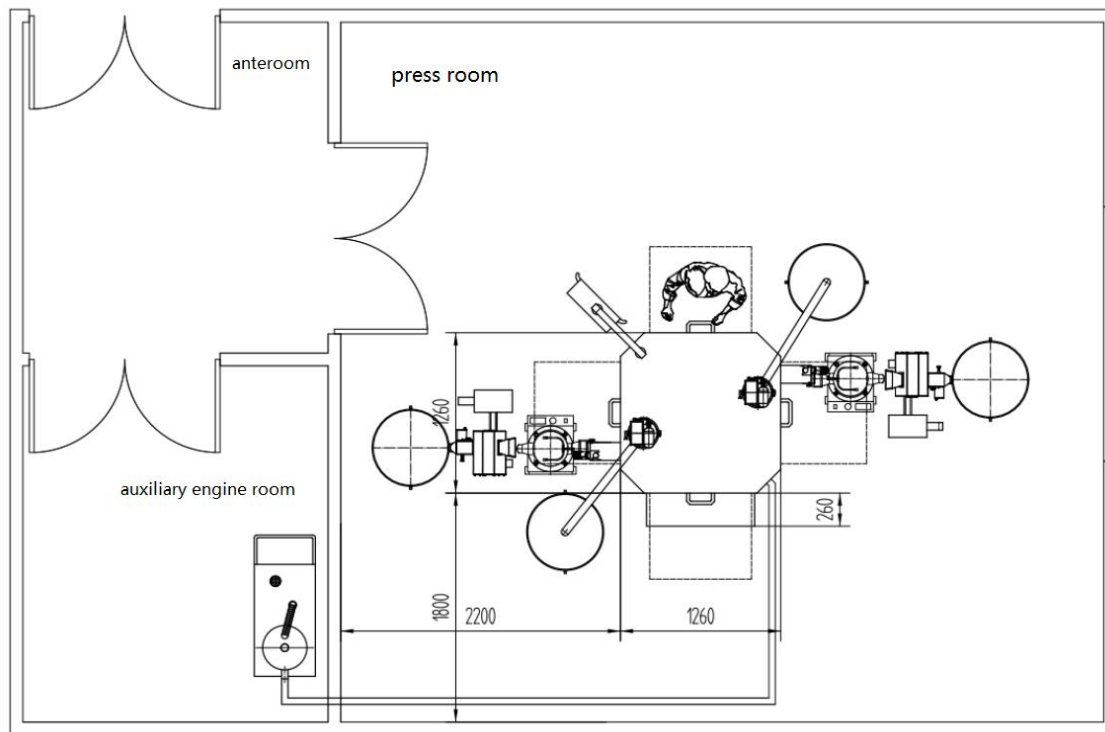
1.2 Reference display charts



1.3 Reference Layout Diagram

Auxiliary equipment:

- Vacuum cleaner (standard)
- Gold inspection machine (optional)
- Screen machine (optional)
- Vacuum feeder (optional)
- Lift feeder (optional)



1.4 Equipment parameters



Model	GZPK-45	GZPK-55	GZPK-75
Capacity (Tablets/h)	405000	495000	675000
No.of station	45	55	75
Max.tablet diameter (mm)	25	16	13
Rotation speed (r/min)	75	75	75
Main.tablet diameter (KN)	100	100	100
Pre-pressure (KN)	20	20	20
Main.filling depth (mm)	20	20	20
Dia.of.die (mm)	38.1	30.16	24
Length of punch (mm)	133.6	133.6	133.6
Total power (Kw)	7.5 (frequency conversion11)		
Overall weight (Kg)	4580		
Overall diemensions (mm)	1520X1260X1850		
Noise	≤75DB (A)		

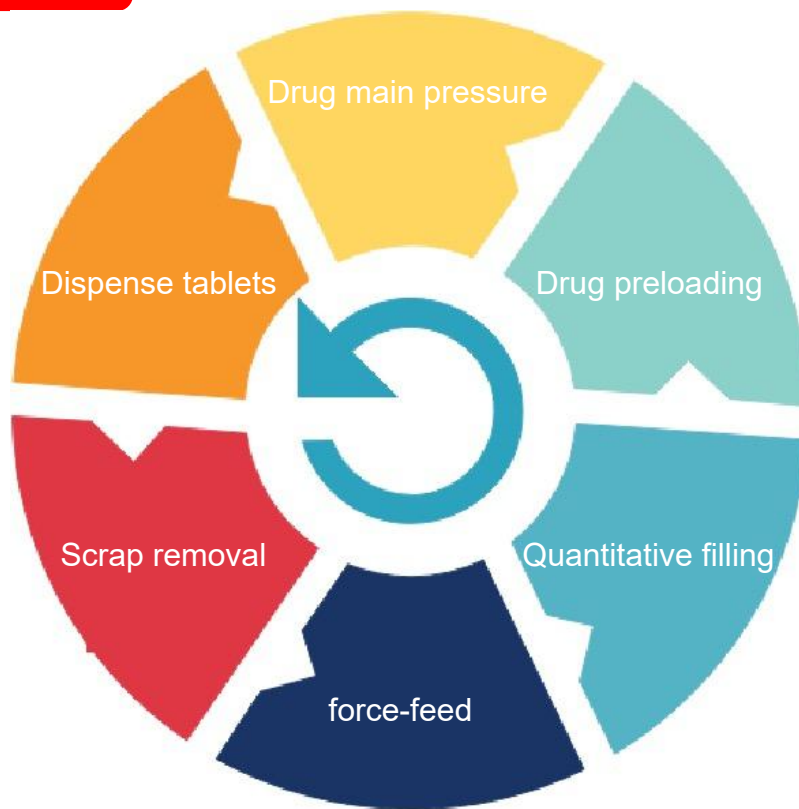
➤ The machine may make improvements to the technology without prior notice, the attached pictures show the options that may be offered

Part 2



Working principle

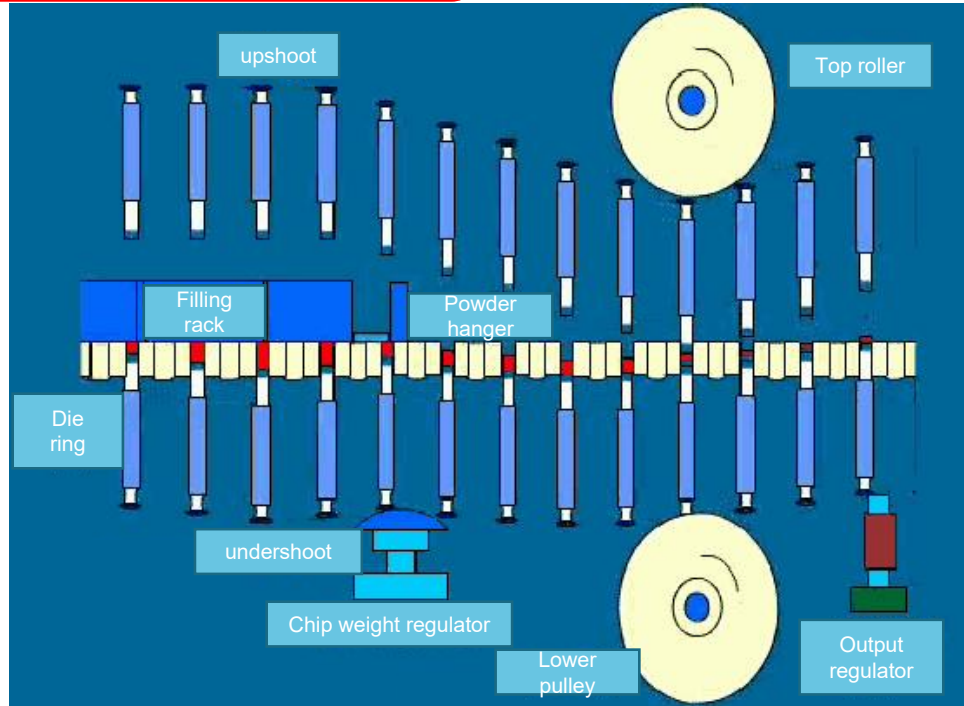
2.1 Work flow



2.2 Structural analysis



2.3 Working principle expansion diagram



2.4 Stamping die



- The die goes up and down and the head is long and short
- The die can adjust the shape and dosage of the tablet



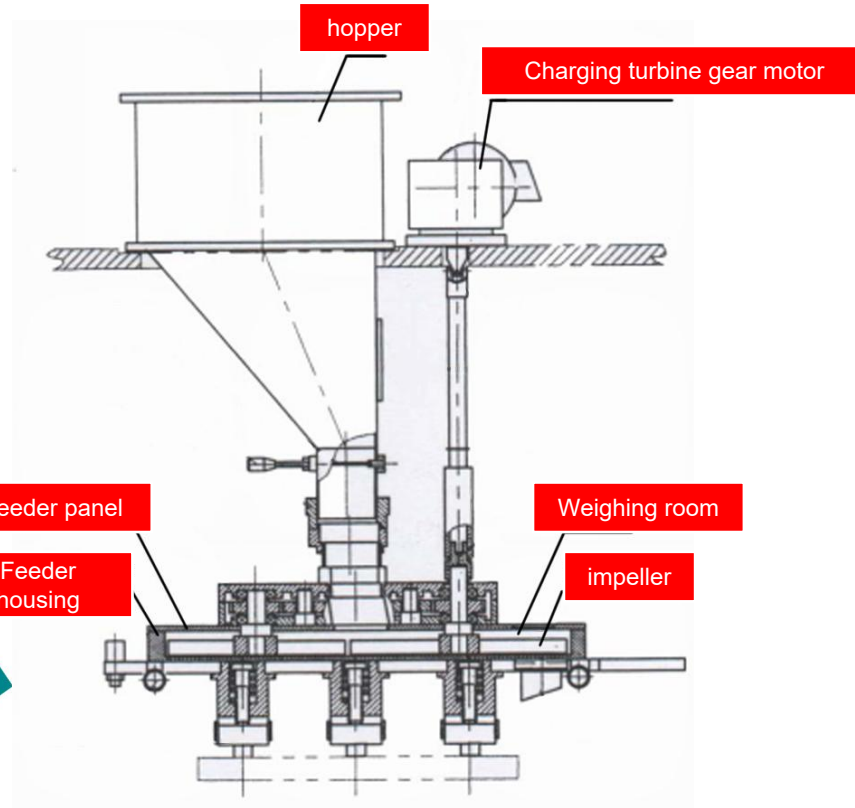
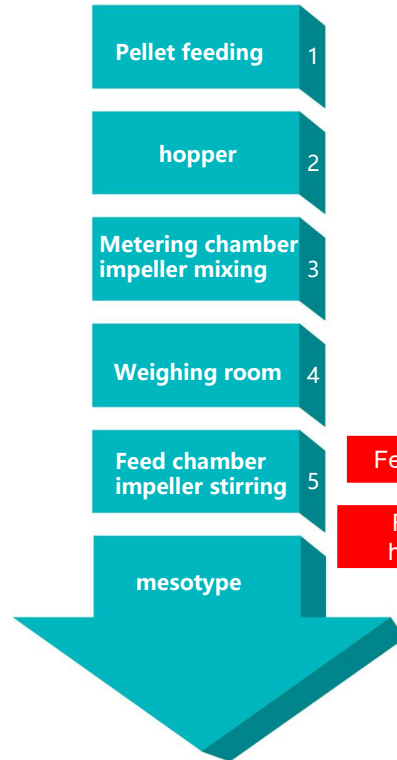
2.5 Working turntable

- The turntable rotates for one week to drive the die to pass through the feeding mechanism, filling mechanism, pressure mechanism, and tablet discharging mechanism in order to complete the process of continuous tablet pressing.

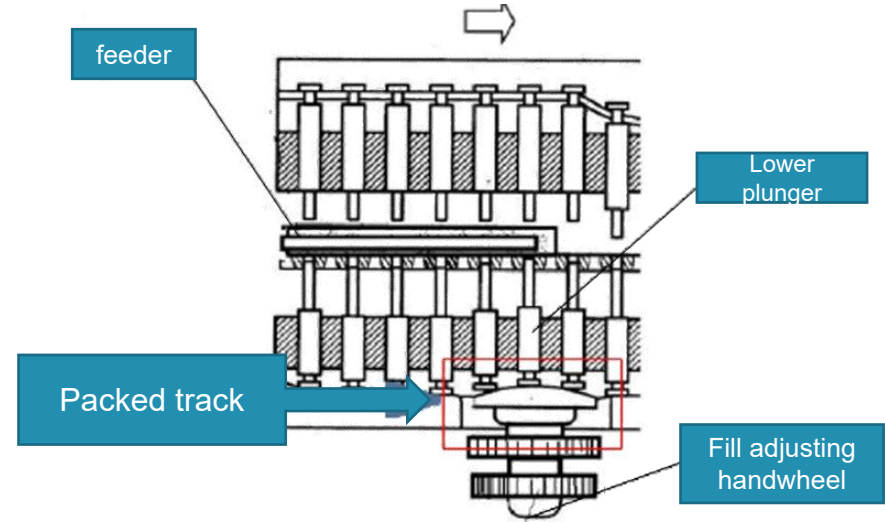
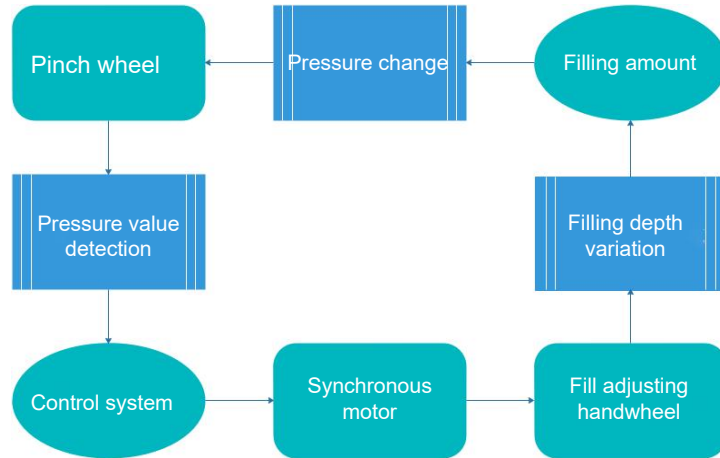


- Rotary speed control;
- On the operation interface, press "speed up", "speed down", key to the turntable for stepless speed regulation

2.6 Forced feeder



2.7 Filling mechanism



2.8 Preloading mechanism

01

Eliminate the air filled by the die and improve the quality of the tablet

02

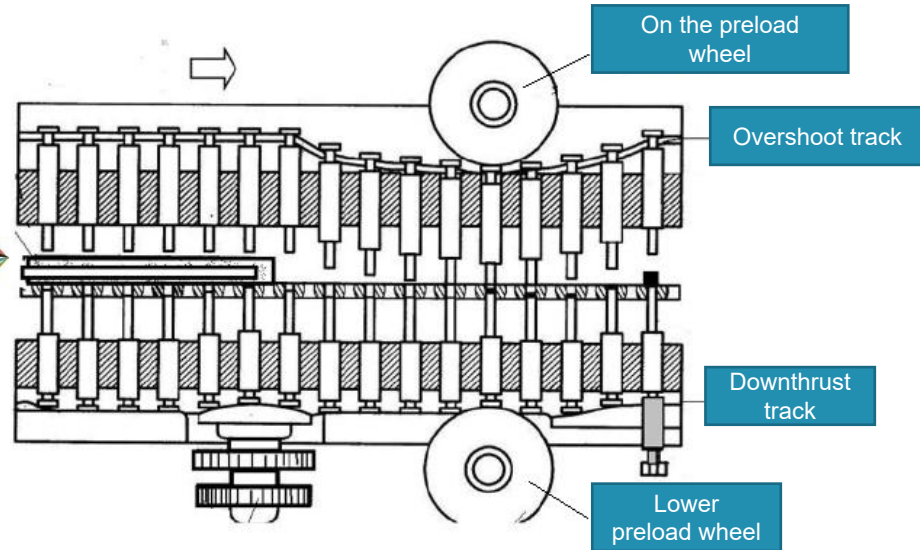
Make the material more compressible after entering the main pressure

03

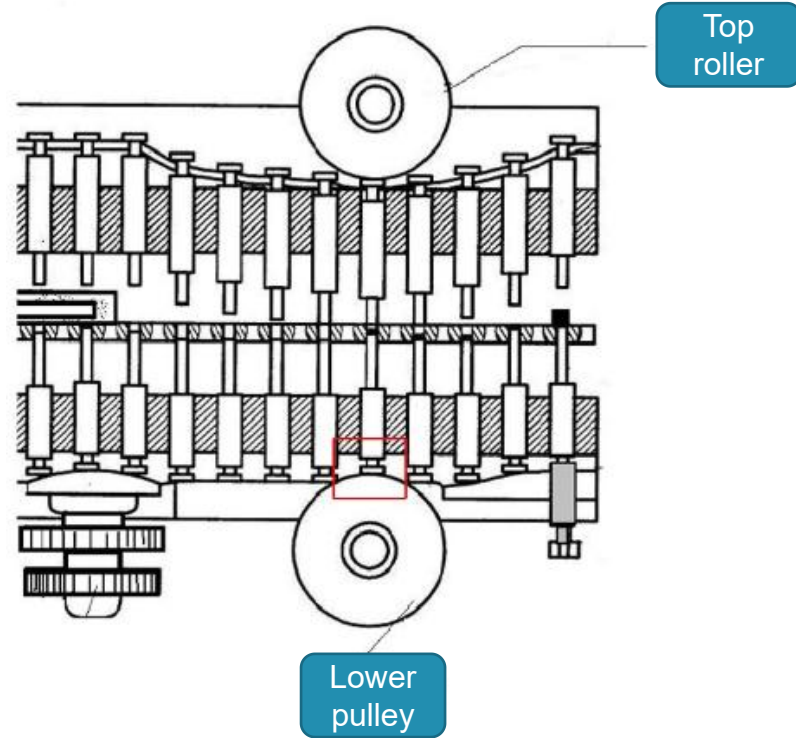
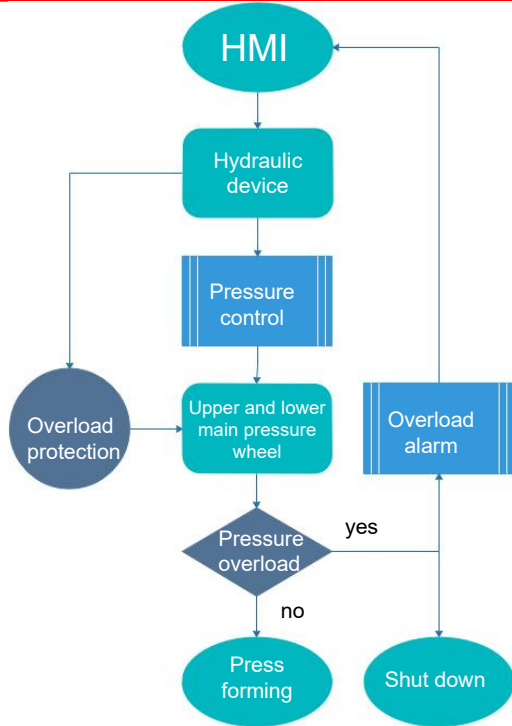
The main pressure process is shortened

04

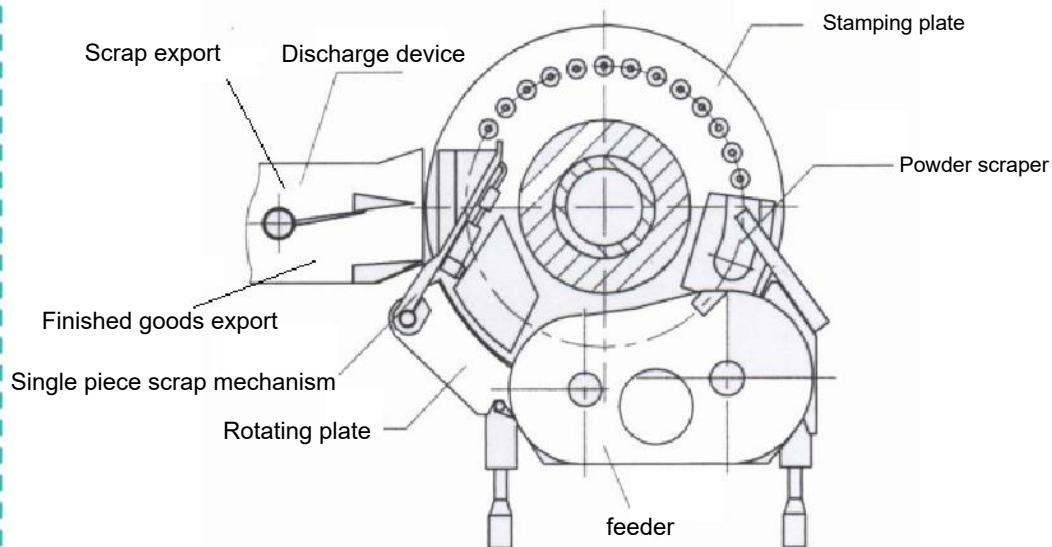
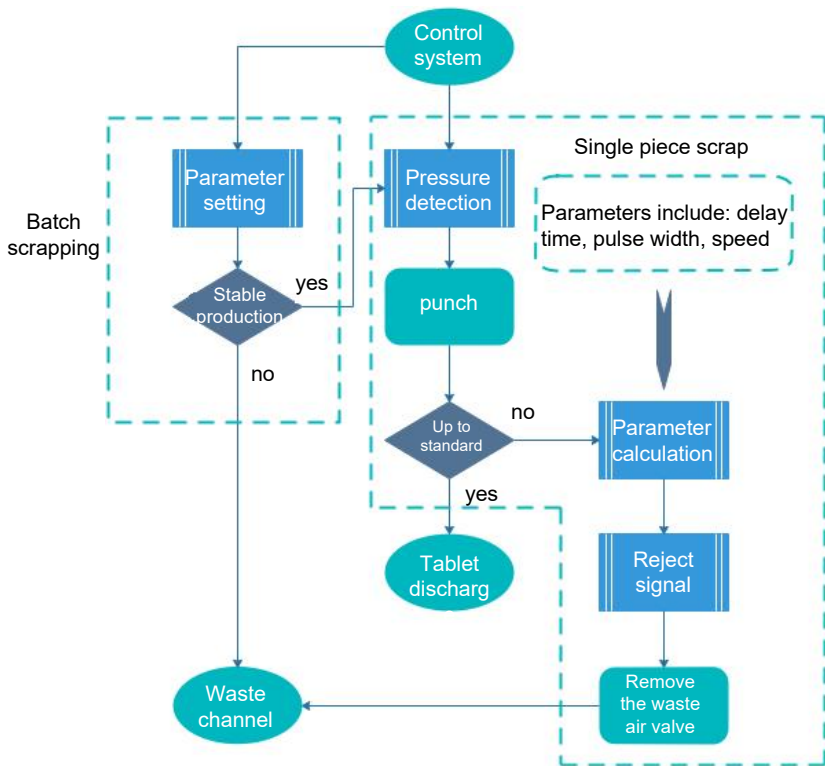
Improve the working efficiency of the tablet press



2.9 Main pressure mechanism



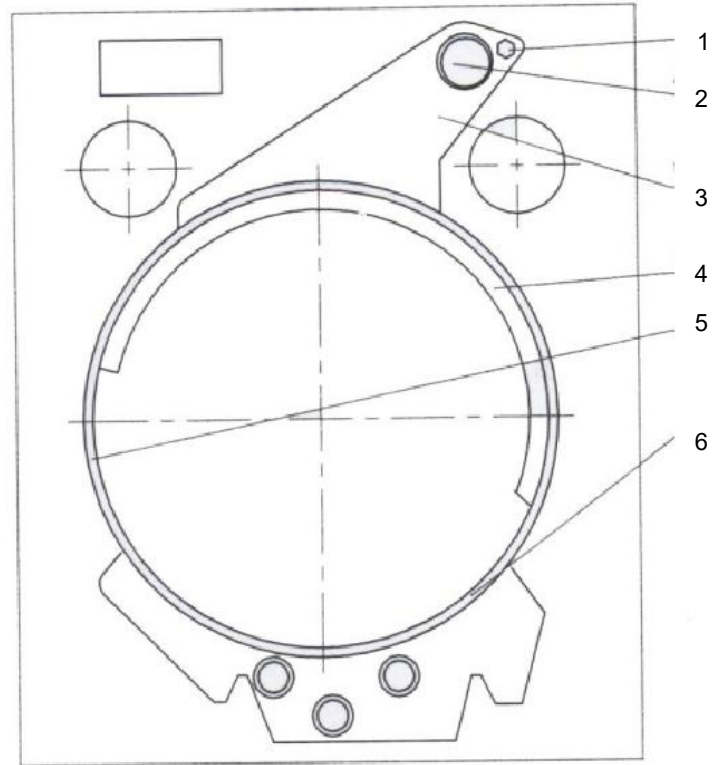
2.10 Release mechanism



2.11 Powder absorber

- Functions:
- Clear the punch plate and rod dust
- Remove sheet chamber dust

- 1. Lock the screw
- 2. Air volume regulating valve
- 3. Powder absorbing shell
- 4. Right coaming
- 5. Left coaming panel



Part 3



Auxiliary engine

3.1 Material feeding method

Hand feed



- Add the material to the hopper manually
- High dust, high labor intensity
- Suitable for smaller batch production

Elevator feed (optional)



- Material pipe with soft connection charging
- The feeding process is closed, safe and hygienic
- Suitable for mixing and feeding to solve the problem of stratification

Vacuum feeder (optional)



- Compact structure, airtight, no pollution, safety and health, low noise
- Easy to install, easy to operate, fast delivery speed
- Suitable for the height of 2.7m and above the floor workshop

3.2 Tablet polishing (optional)

- Screen machine is a special polishing equipment for tablets, which can complete the dust removal work on the surface of various shapes of tablets.
- Multilayer screen structure can effectively isolate tablets and dust.
- The amplitude and production speed are continuously adjustable.
- It is easy to disassemble and install, easy to use and clean.
- Reliable performance, high efficiency, low noise
- The entire production process is intuitive and visual.



【 Tablet screen machine 】

3.3 Other auxiliaries



【 Metal Detector 】 (Optional)

- Metals can be separated from materials
 - Integrated metal foreign object removal system, even if the metal is sealed in the product can be detected
 - Available in various calibers and sizes for all practical applications
 - Compact and easy to install
-
- It is used for dust removal and collection in working turntable



【 Industrial vacuum cleaner 】

Part 4



Performance

4.1 Stepped dosing system



This equipment [stepped triple impeller feeder]

- ◆ The design of large area overfilling, lengthening dosing section and high-precision forced-feeding system make the difference control of slice weight more accurate;
- ◆ The double step design buffered the impact force of the material falling, effectively used the feeding area, avoided the parallel feeding blind area, no feeding dead Angle;

comparison

Peer [parallel type doser]

- ◆ The parallel feeder has a feeding blind area, which is prone to insufficient filling and large difference in weight, and some materials will caking in the feeder.
- ◆ Inclined barrels, material flow is not ideal, low adaptability.

4.2 Stable drive train



The equipment adopts [three-stage transmission]

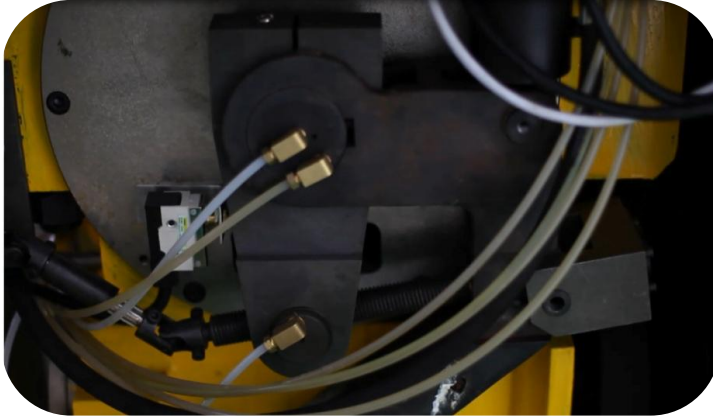
- ◆ The three-stage transmission system (pulley combination, turbine pair, gear pair), the main shaft does not rotate and the frame is firmly connected, and the main motor power directly drives the impact and rotation;
- ◆ The punch plate rotates around the fixed spindle, making the punch plate surface runout and warp runout tend to zero, which greatly improves the rotating smoothness.
- ◆ The amount of running powder is small, saving the waste caused by running powder;

comparison

Peer-to-peer use of [secondary drive]

- ◆ The spindle is fixed to the punching disk and the spindle (punching disk) is driven by the main motor via a toothed belt pulley and worm gear. The end runout and radial runout of the punch disk are large and the operation is not smooth, especially at high speeds.

4.3 Hydraulic system



【Principal pressure】



【 Preloading 】

Main pressure, prepressure twice forming, large pressure wheel, five-column frame structure, so that the machine has a long pressure time, stable work and load-bearing load without deformation ability. Ensure piece weight accuracy and hardness while maintaining smooth operation and low noise.

4.4 hydraulic system



[Stable hydraulic system]

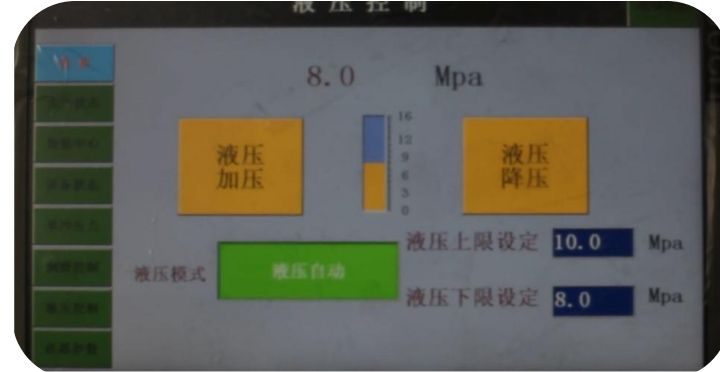
The hydraulic pump station and accumulator form a static pressure preservation system, which realizes the elastic support and overload protection of the pre-pressing wheel and the main pressing wheel, and ensures the smoothness and low noise of the pressing process.

4.5 Automation of the system



[Automatic piece weight adjustment]

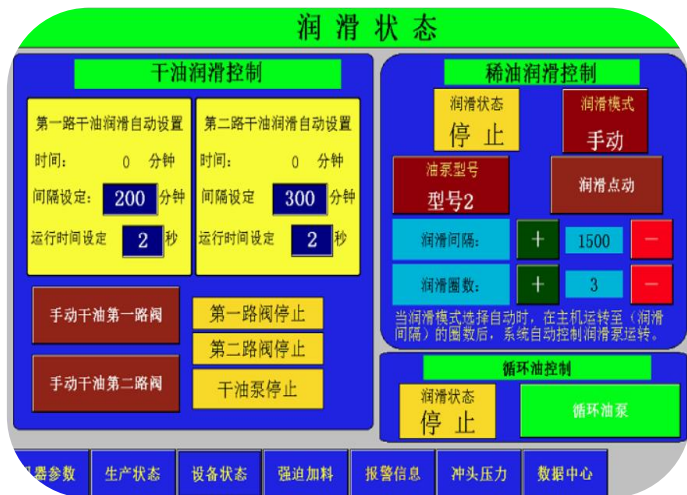
After the production parameters are set, the system can automatically make adjustments to increase and decrease the amount of material according to the set filling amount in order to minimize the amount of difference in the tablets.



[Hydraulic System Automatic Function]



The user is able to set the upper and lower limits of the hydraulic system and the computer automatically stabilizes the hydraulic pressure between the set values.



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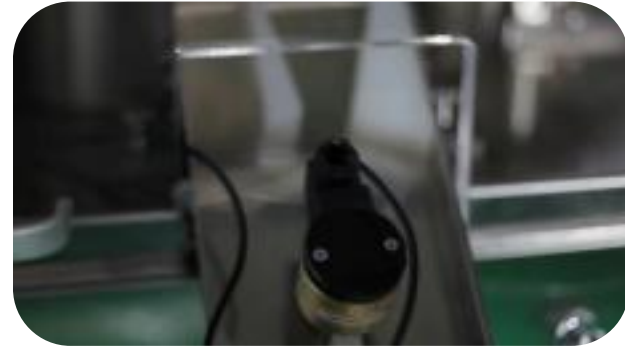
[Three precise and automatic lubrication systems]

Fully automatic centralized lubrication system with high-precision central lubrication pump and quantitative distribution valve not only ensures the full lubrication of punching dies, guide rails, pressure wheels and other positions, but also solves the problem of oil contamination of tablets. It improves the qualification rate of the products, greatly reduces the risk of sticking punch, improves the stability of the equipment, improves the service life of the accessories, and reduces the cost of the accessories.

- ◆ Intermittent thin oil lubrication system: timed quantitative, open pipeline lubrication up and down stroke rod, effectively reduce the probability of lubricating oil contact with drugs, that is, reduce the possibility of drug pollution;
- ◆ Intermittent grease lubrication system: timed quantitative, open pipeline lubrication upper and lower guide rails;
- ◆ Continuous circulation lubrication system: the continuous closed pipeline lubricates the gear pair and the main shaft, while lubricating, it also takes away part of the heat on the punch plate, which can keep the punch plate running at low temperature.



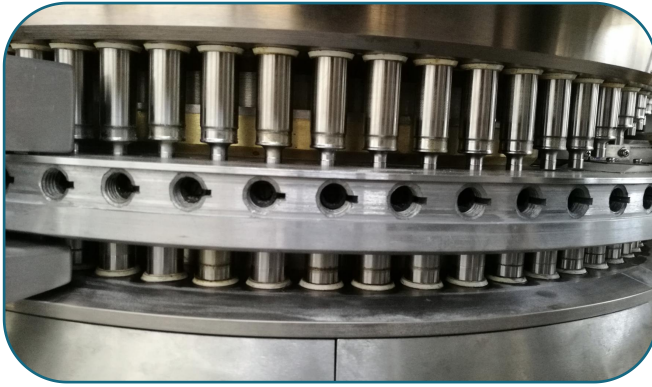
[Scrap system]



[Scrap solenoid valve]

The system can carry out delayed reject function. When the equipment starts and stops, the channel switching solenoid valve automatically switches to the waste channel and rejects the waste pieces automatically.

4.6 core component



【High Precision Punching Plate Combination】

Adopting the highest domestic coordinate grinder and other equipments to ensure the dimensional accuracy, positional accuracy and roughness requirements of punching, which makes the work of replacing punching dies easier, greatly reduces labor intensity and improves labor efficiency;



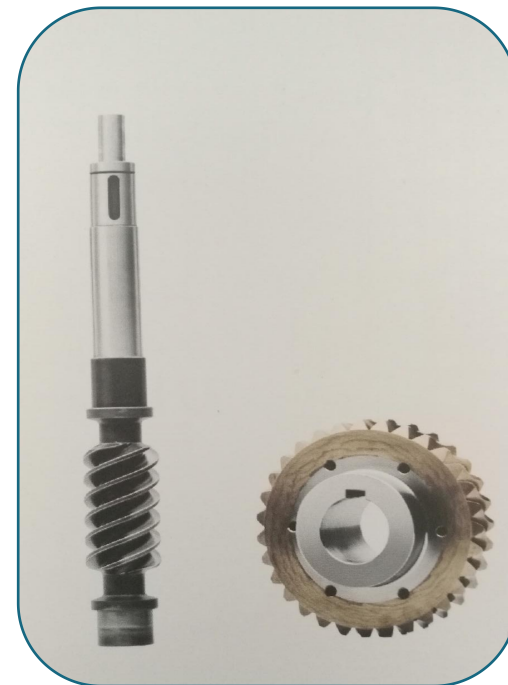


[High-precision Worm Gear]

- ◆ Professional manufacturers guarantee the transmission worm gear pair to 6 levels of accuracy.
- ◆ Special process is adopted to ensure that the transmission gear pair reaches 6 level accuracy, strong bearing capacity, long life and low noise.
- ◆ Advanced processing equipment and reasonable process methods ensure the high precision and high quality of the core components.

【 High precision gear pair 】

【 High precision punching plate 】





[High Precision Bearings]



【High-precision guide rails and press wheels】

- ◆ Adopting high-precision bearings, smooth transmission, long life and low noise.
- ◆ Adopting high-precision guide rails and press wheels; wear-resistant, with good consistency and interchangeability.



comparison



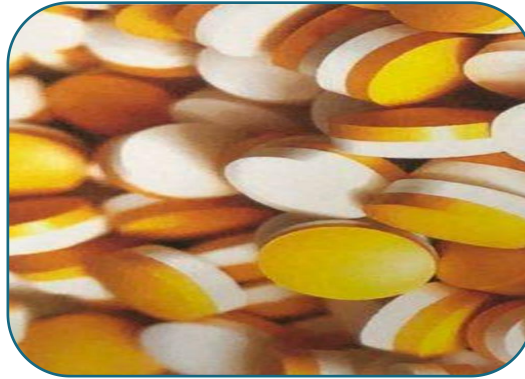
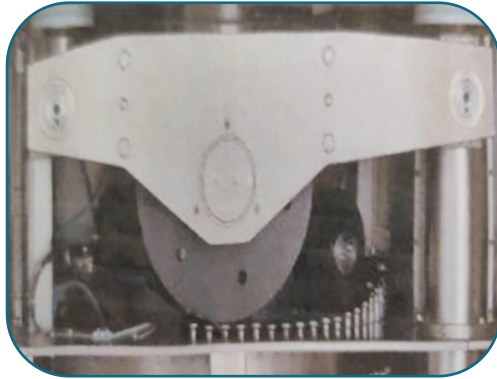
The machine [Convex-concave center mold locking structure].

The contact surface of the top wire of the center punch plate is convex-concave, and the convex-concave surface of the top wire and the ring groove of the center die make a horizontal fit to tighten (face-to-face contact), which ensures that the center die won't be taken out of the tableting machine for a long period of time, which is extremely high in safety and lowest in risk.

Comparable [Tapered center mold locking structure]

The contact surface of the top wire of the center die of other manufacturers in the same industry adopts the conical surface (point contact), and the top wire adopts the way of side top with the center die, and this kind of side slanting top in the working process of the tablet press because of the sticking punch or astringent punch and so on, there is the center die in the position of the tablets by the downward punching out of the holes of the center die, and then the tablets will be out of the stopper bar, the forcing of the feeder, and other devices all hit the broken, crash the car and such serious accidents, which will cause a long time to stop the production of the user, waiting for the spare part to repair the serious losses.

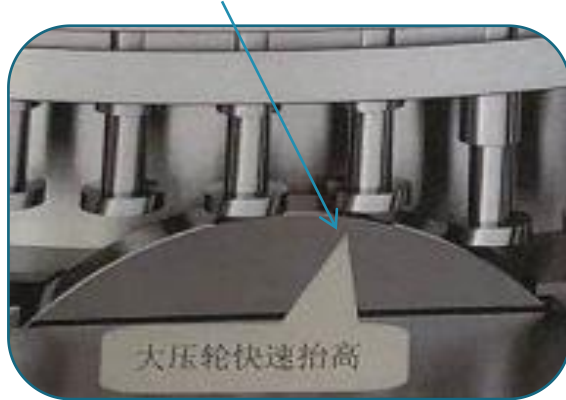
4.7 Dual Slice Systems



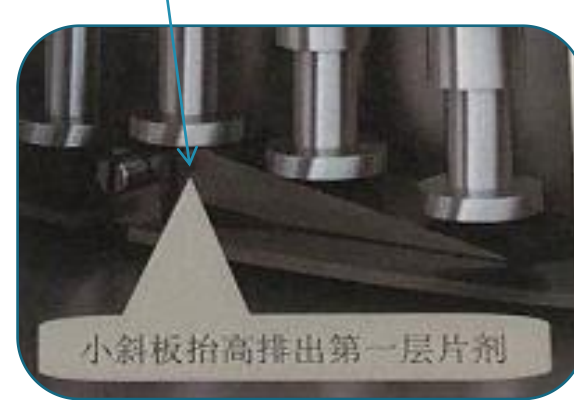
[Double-layer film system]

Under the pressure of the main press wheel, the hardness of the tablets increases with the increase of the compression stagnation time, which can significantly improve the hardness and get better quality of the tablets, with the function of pressing double-layer tablets, and can also press ring-shaped tablets and shaped tablets.

Rapid elevation of the large pressurized wheel



Small inclined plate elevated to discharge the first layer of tablets



[Double-layer film system]

Capable of checking the weight of the first layer of tablets online. When the first layer of tablets is weighed, a cylinder-type pressurizing structure is used to quickly pressurize the first layer of tablets. Then the first layer of tablets is discharged by the first compression station under the punch lifting mechanism, and the weight of the first layer of tablets is detected in time.

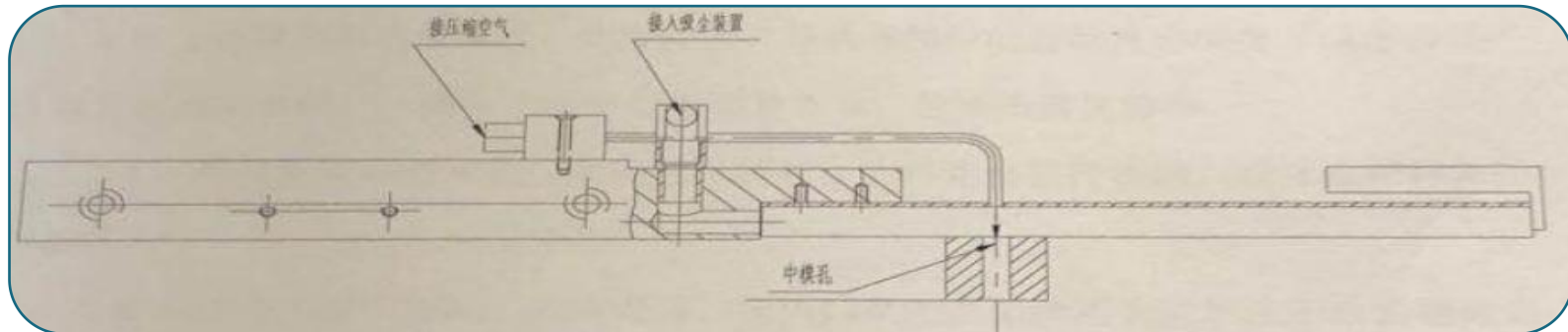
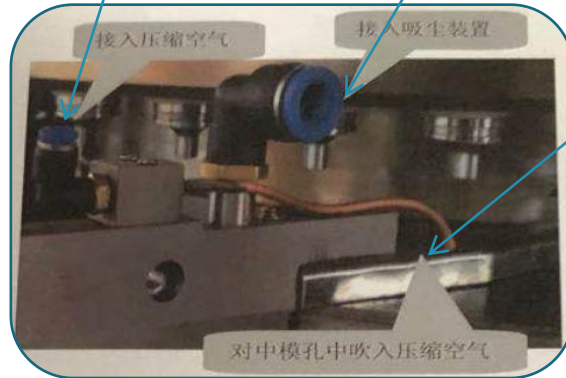
Connected to a dust extraction unit

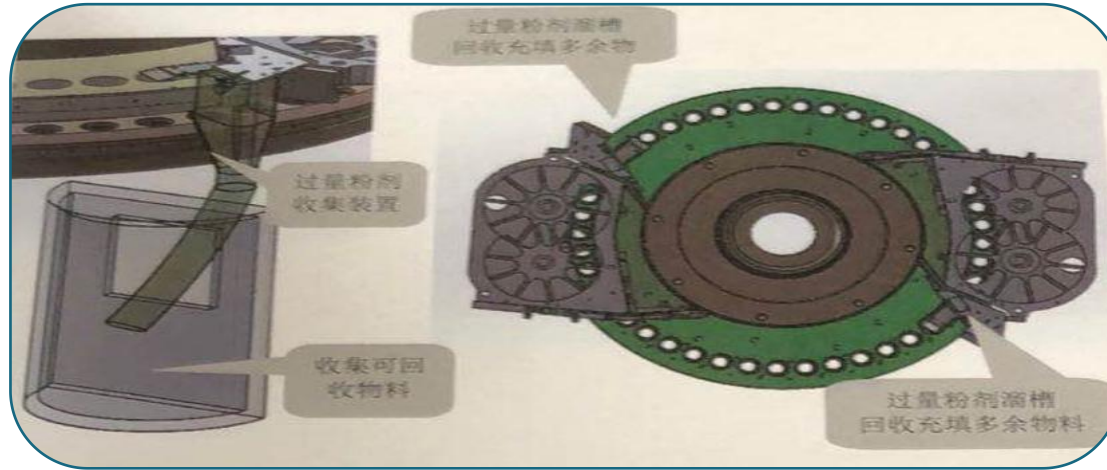
Access to compressed air

Blow compressed air into the center mold hole

Dual Layer Chip System

It has the function of cleaning the middle mold to ensure that the double-layer tablets will not be mixed and the boundary is not clear. After the initial compression of the first layer of material, the uninterrupted air blows up the excess dust in the middle mold, which is sucked away by the dust-absorbing device through the dust-absorbing channel to ensure that there is no mixing of double-layer tablets and the boundary is clear after pressing.

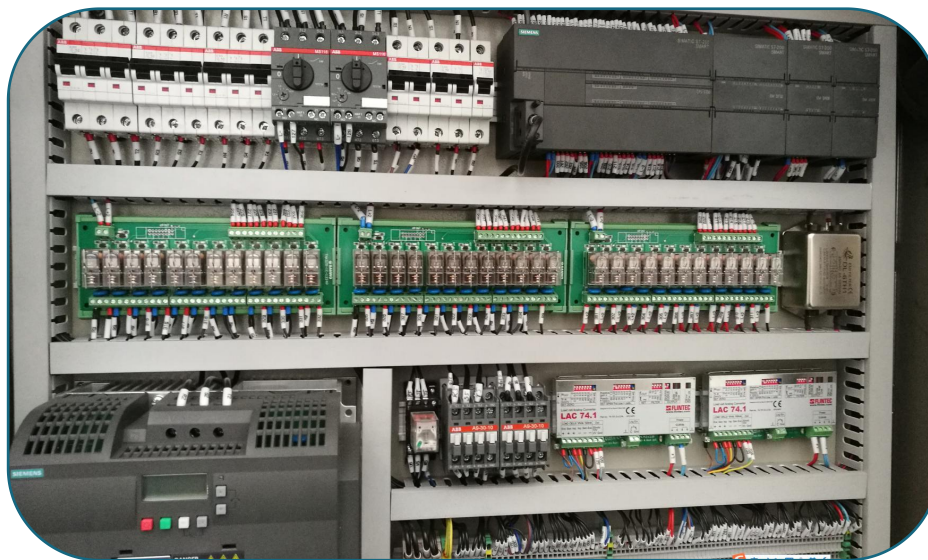




[Double Layer Chip Material Recycling System]

The double layer sheet press has a material recycling feature. Excess material from the first layer is removed from the mold cavity and sent to the left collector. The remaining material from the second layer is sent to the right collector (no material circulation between the two layers). This completes the function of recycling the double-layer material without mixing.

4.8 electrical system



[Reliable electrical system]

- ◆ Each functional parameter is automatically controlled by the programmable controller, the main electronic control components adopt imported brands, international wiring, easy to repair and maintenance, advanced control principle, reliable imported devices, to ensure the precise realization of the program control and chain protection function.



Thanks

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