

GZPK-15/17/20 Speed Rotary 1) Automatic High Tablet Press Machin	ne 产品介绍 Products	四 200	
全产品链	自动化	数字化	智能化	大健康产业
Full product chain	Automatization	Digitize	Intelligent	Big Health Industry



Contents





Part 1 Product

overview



1.1 Product overview

GZPK-260 series automatic rotary tablet press machine, which concentrates on the technical features of domestic automatic rotary tablet press machine, and makes significant improvements in machine structure and operation control. The whole machine is designed with beautiful appearance, fine workmanship, high efficiency and smooth operation. The operation control adopts industrial PLC automatic control, leaving more space for development.



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)
- Sampling scale (optional)



1.4 Equipment parameters





Model	GZPK-15	GZPK-17	GZPK-20	
Capacity (Tablets/h)	65000	75000	95000	
No.of station	15	17	20	
Max.tablet diameter (mm)	25	16	13	
Max.irregular long axis (mm)	25	18	16	
Main.tablet diameter (KN)	100	80	80	
Pre-pressure (KN)	12	12	12	
Main.filling depth (mm)	20	16	16	
Dia.of.die (mm)	38.1	30.16	24.01	
Length of punch (mm)	133.5	133.5	133.5	
Tablet thickness range (mm)	0.5-10	0.5-8	0.5-8	
Total power(Kw)	5.5			
Overall weight (Kg)	675			
Overall diemensions (mm)	680×650×1690			

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



Part 2Image: Working principle



2.1 Work flow









2.3 Working principle expansion diagram





2.4 Stamping die









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



It can adjust the depth of the filling amount and control it by adding or reducing the material. For the lower CAM track can be based on the average filling depth, select the track average should be closest to the required filling value.



2.8 Preloading mechanism





Top roller

2.9 Main pressure mechanism





When the turntable rotates, the upper and lower punch rod moves up and down with the curved track, and achieves the purpose of pressing the sheet through the extrusion of the press wheel. The large size of the main press wheel enables the best pressing time for the tablets produced.



2.10 The basic structure of the highspeed tablet press - the film mechanism

The release mechanism is composed of a fixed frame and a push rod. In order to achieve the best effect, the curve of the beginning section of the ejector rod should be consistent with the hole edge of the middle die.

There are two channels, one qualified channel and one unqualified or rejected channel. The operating state of the two channels is controlled by a torque motor mounted on the outlet slot. It turned a door on and off. When the machine first started working, the scrap channel was opened. Once the required punching speed is reached, the waste channel is automatically closed according to the setting, and the qualified chip channel is opened. In the case of shutdown or emergency stop, the qualified film channel is closed immediately, and the waste film channel is opened at the same time.



Output module

1. Fixed base 2. Organic plate 3. Stop block 4. Rotating plate 5. Small motor 6. Exit slot



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.





3.3 Other auxiliaries



- 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





【 Metal Detector 】 (Optional)

[Industrial vacuum cleaner]



Part 4



Performance

4.1 Automaticity of system



[Centralized Lubrication system]

Dry oil lubrication system, thin oil lubrication system and circulating lubrication system provide enough lubricant to each lubrication part through automatic control to ensure the safe operation of the machine;





The system has two channels for batch eliminations. The operating state of the two channels is controlled by a transfer solenoid valve mounted on the outlet slot. When the machine starts working, the scrap channel is opened. Once the required punching speed is reached, the waste channel is automatically closed according to the setting, and the qualified chip channel is opened. In the case of shutdown or emergency stop, the qualified film channel is closed immediately, and the waste film channel is opened at the same time.



4.2 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.



4.3 Feeding system



The feeder is easy to disassemble and assemble, easy to clean. High-precision impeller force-feeding mechanism, with the agitator to force the material into each die hole, so that the difference in the weight of the sheet is smaller, the feeder feeder feeder groove is equipped with two receiving scraper, used to recycle the material on the surface of the middle punch tray into the feeder. The problems of insufficient filling of free blanking, excessive dust of working plate and cross contamination of ordinary sheet press are solved.

[Forced feeding system]



4.4 Core components



[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.



4.4 Core Components



The processing technology of punching die holes of other manufacturers is normally cut by boring machine, because this processing method leads to the poor finish of the middle plate hole, and the later stage and the middle die can only be interference fit, resulting in the difficulty of entering and exiting the hole of the middle die.

The company's middle die holes in the boring machine cutting, and then each hole grinding, at the same time with the coordinate detection equipment for hole detection, to ensure the finish and accuracy of the hole. The processing cost is much higher. The punch plate is the most core workpiece of the tablet press, and its accuracy can fully represent the overall accuracy of the high-speed tablet press.

【 High precision punching plate combination 】





Remove and assemble the mold by hand without borrowing any tools. The design and development ensure that the medium die hole of the plate of the high speed tablet press will not be deformed for a long time. Other manufacturers because of borrowing tools to knock on the mold to complete the assembly and disassembly, but borrowing tools to knock on the mold is easy to extrude metal chips, and labor intensity, low production efficiency, waste a lot of time, while years of knocking on the mold, so that the hole becomes elliptical, precision loss, up and down punch with the mold precision problems.

【徒手换冲】





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.

comparison



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.





[oil collecting ring]

The oil collecting ring of the company's tablet press is completely redesigned and opened by itself. According to the working process of the tablet press, the punch rod needs lubrication, and the oil on the punch rod is collected through the oil collecting ring during the lubrication process. The oil collecting ring designed by our company can ensure the effective collection of lubricating oil on the basis of ensuring that the lubricating oil is effectively lubricated, which can avoid the contamination of lubricating oil to the drug and the appearance of "black dots" pieces, which have risks to the quality of the drug. Although this is a small detail, it has certain uses for avoiding the risk of product quality, improving the quality of the drug and reducing waste.





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