



## *T420 Single Discharge High Speed Tablet Press Machine*



Designed for efficient tablet production in the pharmaceutical and nutraceutical industries. This versatile tablet press offers a range of configurations with punch stations available in 31, 38, 44, and 48, allowing for a production output of 9 300 to 331 200 tablets per hour, depending on the model.

### **How does T420 CANAAN Tablet Press Machine Work?**

- The gear reducer is driven by three asynchronous variable frequency speed regulating motor via timing belt.
- The reducer is assembled with the main axis. The turret for installing the punch dies is assembled on the end face of the main axis. The main axis drives the turret to rotate.
- The upper and lower parts of the turret are fixed with segmented guide rail. When the turret rotates to drive the punch, the guide rail pushes/pulls the punch up and down.
- Powder is fed into the double-layer three-chamber feeder through the top hopper. The distribution wheel is installed on the top layer of feeder to push the powder into the lower layer according to the ratio. Powder is pushed into medium die hole by filling wheel installed at the front end of lower layer. Then the dosing wheel at lower back-end, scrape away the overfilled powder, and accurately control the filling volume.
- The quantitative guide rail that direct opposite feeder is precisely positioned under the drive of the servo motor and the deceleration mechanism, and it controls the lower punches position to determine the filling depth, with an accuracy of 0.01mm.
- Upper and lower punches are pressed by recompression roller (diameter 250mm; Max. 100KN), and the air in the medium mould hole is discharged to prevent the broken tablets;

The position of the lower recompression roller is controlled by servo, with the precision up to 0.01mm.

- Tablets are formed when upper and lower punches are pressed by main compression roller (diameter 250mm; Max. 100KN), and the position of the lower main compression roller is controlled by servo, with accuracy up to 0.01mm; the pressure when tablet formed is measured by pressure sensor installed under the lower main compression roller, and the data is processed by PLC and compared with the standard value and limit value input in the industrial PC to determine whether the tablet is qualified or not.
- When tablets get into the discharging channel, sorting and rejecting device sort and send the qualified tablets and waste tablets to their corresponding channel under the indication of PLC.
- Qualified tablets channel can be connected with metal detector and tablet deduster.
- When the automatic adjustment switch is switched on, the PLC will automatically drive the quantitative guide rail according to the change of the average value of the tablet weight, adjust the filling amount, so that the tablet weight is always close to the set value.
- The automatic lubrication system can set the interval time to supply oil to each lubrication point quantification ally.
- The vacuum device can be connected to a dust collector.

## **Main Features of CANAAN Tablet Press Machine**

- Level 3 safety circuit, safe operation
- High precision manufacturing, reliable operation
- Modular design for quickly installing and disassembling
- High Performance PLC and Industrial computer control
- Dual cooling system to prevent heat retention and reflux
- Servo motor adjusts pressure and filling depth
- Meet GMP and FDA requirements

## **Function**

- Changeable turret
- Single punch pressure monitoring
- Punch start relief
- Batch management
- Event log
- Pre-pressure monitoring\*
- Punch tightness monitoring\*
- Ejection force monitoring\*
- Single rejection of bad tablets\*
- Sampling for good tablets\*

## Parameters

T420 Single Discharge Tablet Press				
Number of punch stations	48	44	38	31
Model of punch stations	EU 19	EU 19	EU 19	EU 1"
	BBS	BB	B	D
Product output (pcs./H)	14400-	13200-	11400-	9300-
	331200	303600	262200	186000
Max. main compression force (KN)	100			
Max. pre-compression force (KN)	100			
Max. tablet diameter (mm)	11	13	16	25
Max. filling depth (mm)	18	18	18	18
Max. tablet thickness (mm)	8.5	8.5	8.5	8.5
Circumferential diameter of the punch (mm)	420			
Turret speed (RPM)	5~115	5~115	5~115	5~100
Medium mould diameter (mm)	22	24	30.16	38.1
Medium mould height (mm)	22.22	22.22	22.22	23.8
Diameter of punch rod (mm)	19	19	19	25.35
Length of punch (mm)	133.6			
Upper punch insertion depth (mm)	2~6			
Overall dimension (mm)	1200*1400*2100			
Weight (KG)	≈3100			
Standard of power supply	Working voltage: 360-400V, 50/60Hz, Max. current 25 A (6mm <sup>2</sup> ), Power: 9KW.			