

## T220 Single/Double Layer Laboratory Tablet Press



T220 laboratory tablet press is designed and manufactured in three aspects: “excellent and stable performance”, “safety and health of personnel”, “easy-to-use and durable equipment”, aiming to improve the efficiency for customers in an all-round and multi-dimensional way and create greater value.

### Working principle

- Three asynchronous variable frequency speed regulating motors drive gear reducer through synchronous belt.
- The reducer is assembled with the main axis. The main axis drives the turret installed above it 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 gets into the single cavity feeder through the top hopper. A quantitative rotary wheel is installed in the feeder to push the powder into the medium mould hole. A floating powder scraper is installed at the end of the feeder to scrape through the filled powder and accurately control the filling volume.
- The quantitative guide rail right under the 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. 5.6a In the state of double-layer tablet, the first recompression wheel (diameter: 40mm; Max. 5KN) installed between two sets of feeders, pushing the first layer of powder into the middle of the medium mould hole.
- Upper and lower punches go through the main compression wheel (diameter 200mm;Max. 60KN),forming the tablets, position of the lower main compression wheel controlled by servo, accuracy up to 0.01mm;The pressure sensor installed under the main compression wheel of the press station measures the pressure when tablet is formed. 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 waste.
- When tablets get into the discharging channel, sorting and waste rejecting device in the PLC start action, then sort and send the qualified and waste tablets to their corresponding channel. Qualified tablets can enter the sampling channel according to the parameters set.

- Qualified tablets channel can be connected with metal detector and sorter machine.
- 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 quantitatively.
- The vacuum device can be connected to a vacuum cleaner.

## Features

- Level 3 safety circuit
- High accuracy parts
- Modular design
- High Performance PLC and Industrial computer
- Servo motor adjusts pressure and filling depth
- Compliance with GMP and FDA requirements
- Changeable turret
- Single punch pressure monitoring
- Punch start relief
- Batch management
- Event log
- Pre-pressure monitoring
- Punch tightness measurement
- Ejection force monitoring
- Single rejection of bad tablets
- Sampling for good tablets

## Parameters

Number of punch stations	20	8+8	16
Model of punch stations	EU 19 / TSM 19 B	EU / TSM 8 B or 8 D	EU 1" / TSM 1" D
Product output (pcs/H)	6,000-60,000	2,400-24,000	4,800-48,000
Max. main compression force (KN)	60		
Max. Pre-compression force (KN)	10		
Max. Pre-compression force of the first layer (KN)	5		
Max. tablet diameter(mm)	16	16/25	25
Max. filling depth(mm)	18	18/20	20
Max. tablet thickness(mm)	8.5		
The circumferential diameter of the punch (mm)	220		
Turret speed (RPM)	5~50		
Medium mould diameter	30.16	30.16/38.1	38.1
Medium mould height (mm)	22.22	22.22/23.8	23.8
Diameter of punch rod (mm)	19	19/25.35	25.35
Length of punch (mm)	133.6(133.35)		
Upper punch insertion depth (mm)	2~5 (Double layer, the first layer 5~8)		
Overall dimension (mm)	756*1036*1850		
Weight (KG)	around 1200		
The standard of power supply	Working voltage 360-400V, 50/60Hz; Max. current 12A, Power 4.5KW		