

Single Punch Tablet Press - YP-5T

Single Punch Tablet Press

Definition of Tablet Press:

According to terminology standards, the tablet press is defined as:

1. Tablet Press: A machine that compresses dry granular or powdered material into tablets using a die.
2. Single Punch Tablet Press: A tablet press that uses a single set of dies to perform vertical reciprocating motion.
3. Rotary Tablet Press: A tablet press where multiple sets of dies are evenly distributed on a rotating turret, following a specific vertical motion path.
4. High-Speed Rotary Tablet Press: A rotary press where the linear speed of the die axis rotation is not less than 60m/min.

YP-5T Single Punch Tablet Press

Usage:

The YP-5T is designed to compress various granular materials into round or special-shaped tablets.

It is ideal for R&D institutions, schools, and pharmaceutical laboratories for trial production and small-scale manufacturing.

Features:

- A compact, desktop, electrically powered continuous tablet press (can also be manually operated).
- Only one set of dies can be installed at a time; both fill depth and tablet thickness are adjustable.
- Tablets of different shapes and sizes can be made by replacing the die set.
- Small in size, easy to move, simple and convenient to operate.

Technical Specifications:

Max Tablet Pressure (kN): 50

Max Tablet Diameter (mm): 18

Max Fill Depth (mm): 16

Max Tablet Thickness (mm): 6

Production Capacity (tablets/hr): 5000

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Motor Power (kW): 0.75

Dimensions (mm): 700 × 400 × 800

Machine Weight (kg): 125

Machine Installation:

1. Mount the machine securely on a strong wooden or cement table using three M12 anchor bolts. Ideal table height: ~60 cm. For easier disassembly and maintenance, drill a hole in the table aligned with the lower punch rod.
2. Before powering the motor, ensure the motor is grounded for safety. Remove the V-belt and check that the motor rotates in the correct direction (opposite the arrow on the guard or pulley). If incorrect, reverse the wiring. Then reattach the V-belt.

Die Installation and Tablet Compression Adjustment:

Installing Dies:

1. Upper Punch:

Loosen the lower punch locking screw. Rotate the handwheel to raise the lower punch rod to its highest point. Insert the lower punch into the rod slot (align slanted notch with locking screw). Tighten screw.

2. Lower Punch:

Loosen the upper punch locknut. Insert the upper punch into its slot until fully inserted. Use a wrench to hold the hex section and tighten the locknut.

3. Middle Die:

Loosen the center die's locking screw. Hold the die flat and insert it into the die plate hole, making sure the lower punch aligns inside. Press it down completely and tighten the screw. Ensure it's flat to avoid jamming or damage.

4. Alignment Check:

Manually rotate the handwheel to lower the upper punch slowly into the die hole. Check for collision or friction. If there's interference, loosen the die plate screws and adjust the position until smooth operation is achieved.

Tablet Ejection Adjustment:

Raise the lower punch. Its top surface should be flush with the die plate. If not, adjust using the gear to align

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them properly.

Adjusting Fill Depth (Tablet Weight):

Turn the adjustment gear:

- Left Turn: Raises the lower punch = less fill = lighter tablets.

Adjusting Pressure (Tablet Hardness):

Turn the upper punch:

- Left Turn: Lowers the upper punch = higher pressure = harder tablets.

- Right Turn: Reduces pressure = softer tablets.

After adjustment, test 10+ tablets and check quality. Proceed if acceptable.

Die Removal:

1. Upper Punch:

Loosen the locknut and remove the punch. If tight, use pliers carefully.

2. Middle Die:

Loosen screws and gear plates. Push the lower punch to lift the die out. Remove carefully. If stuck, remove the die plate first.

3. Lower Punch:

Loosen screw and raise punch fully, then remove manually or with pliers.

4. Post-Removal Setup:

Reposition punch rods to avoid collisions in future use.

Lubrication & Maintenance:

1. Proper lubrication of all moving parts is critical. Oil all cups, ports, and surfaces before use. Avoid over-lubrication.

2. Check for loose screws before and during use.

3. Always hand-test a few tablets before switching to motor-powered operation.

4. Inspect dies frequently and replace damaged ones promptly.

5. After use, clean machine thoroughly. For long-term storage, apply rust-preventive oil and cover with dust

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protection. Store dies in oil.