

## TDP-0 Manual Single Punch Tablet Press Machine



## Instructions:

TDP-0 is a manual type single punch tablet press machine. It can punches round tablets less than 12mm. The weight of the press machine is only 22kg, this single press machine applicable to the pharmacy, laboratory, home, school, or other places to apply. Motor is not needed, so it is suitable for any remote areas, it is good for energy saving, reducing carbon emissions. A lot of the branded vitamin tablets on the high street have unnecessary additives and supplements that you just don't need. This press allows you to mix the vitamins and supplements that you require for your exact diet and convert them into convenient pills. Maybe you are considering setting up a small business selling vitamin, weight loss, or herbal tablets. If so this is the right press for you. It is able to produce up to 2400~3600 tablets per hour, using a maximum presser of 15 KN (depending on model). It will run for hours continuously producing identical tablets time after time, giving your business a professional look. It has small volume light weight, easy to carry, But will make all kinds of powder and granular material into suppression.

## Machine Feature:

1. The main body of this machine is the gantry-type made by carbon steel. The main spindle junction with the partial core gear and the cam. The rocker arm and the hand shank are on the right of the spindle. When turn the main spindle by manual, then it can cause the partial core gear, cam, lifting poker, feeder to turn, do different lifting movement.
2. The process of this machine is: A. feeding material; B. punching the tablets; C. ejecting tablets. These are the three procedures are working continually. Each program can be adjusted, suitable for all kinds of tablets to forming.
3. R & D will find this press useful as it can hold from as little as 2 grams of raw powder and you can produce one tablet at a time using the hand crank function.
4. The fine features of this machine are small volume light weight, attractive appearance, compact structure, simple operation, extensive use, easy to carry and so on. But it is also can make all kinds of tablet by using different types of die.
5. The TDP-0 can provide many different uses, Including:
  - 1) Small or large scale production, as this press can be hand-operated as well as mechanically, you can produce single tablets for a sample before you start producing larger batches. Only one pair of punching dies can be erected on this press at a time.
  - 2) Both filling depth of material and thickness of tablet are adjustable.
  - 3) Turning different kinds of granular raw materials into a variety of different tablets.

## Technical Parameters:

|                     |                   |
|---------------------|-------------------|
| Model               | TDP-0             |
| Die                 | 1 Set             |
| Production Capacity | 30-50 Tablets/min |
| Diameter Of Tablet  | (5-10) mm         |
| Thickness Of Tablet | (2-6) mm          |
| Max. Pressure       | 15 KN             |



|                |                |
|----------------|----------------|
| Packing Size   | 350×280×620 mm |
| Packing Weight | 26 Kg          |

## General Description:

This machine is a manual type single punch tablet press with the capacity to produce round tablets of less than 12 mm in diameter and is applicable to pharmacies, the chemical industry, the food service industry and medical establishments among others.

## Structure:

The main body of this machine is a gantry-type cast in carbon steel. The main spindle junction connects with the partial core gear and the cam. The rocker arm and the hand shank are found to the right of the spindle. When turning the main spindle manually, it causes the partial core gear, cam, lifting lever feeder to turn also but with a different lifting movement.

## Procedure:

1. feeds in materials
2. punches tablets;
3. ejects tablets.

These three procedures work continuously and each program can be adjusted to form tablets to different specifications.

## Physical Features:

- small in size
- light weight
- pleasing overall design
- compact structure
- operator friendly
- versatile – comes with different die
- portable

## Operation, Adjustment and Guidelines:

### Setting Up The Die Molds (2)

#### STEP 1

- Dismantle the hopper by unscrewing the large spring loaded nut under the mold platen.

- Loosen the small nut (2) on the plunger under nut (1).

### **Note**

When inserting the lower punch the triangle should face towards you. During insertion swing the handle gently backwards and forwards to facilitate positioning of the lower punch.

### **STEP 2**

- Loosen the small nut (1) on the face of the mold platen
- Insert the middle mold into the hole in the mold platen.

### **STEP 3**

- Loosen the large nut over the middle mold.
- Insert the upper punch.
- After inserting the upper punch use the handle to carefully lower the large nut onto the upper punch. It will stop by itself. Using two fingers push the upper punch upwards until it will not go any further.
- You will now need one spanners and a pair of pliers.
- Tighten the large nut but it must not reach the nut above it. Use one spanner to hold the upper nut in place and the pliers to tighten the lower nut.

### **STEP 4**

- Turn the machine round. To refit the hopper, refit the spring loaded nut under the platen using two hands to make sure the shaft goes into the hole in the moving plate above the platen. The die mold is now set.

### **Note**

Before using the machine turn the handle a few times to make sure the moving parts run smoothly.

## **Dismantling The Mold Dies (2)**

### **STEP 1**

- Dismantle the hopper as before by unscrewing the large spring loaded nut under the mold platen.
- Loosen the large nut over the middle die mold.
- Turn the handle anti clockwise until it reaches its highest position to raise the upper punch to its highest position.

- 
- Using a pair of pliers, grip and remove the upper punch with a downward movement. If it is tight, tap your pliers with another tool.
  - Loosen the screw (1) on the face of the mold platen.
  - Insert a long handled Allen key into the space under the die mold and push the die out.
  - Loosen screw (2) under screw 1.
  - Remove the lower punch by gripping it with a pair of pliers and raising it by turning the handle. The mold die is now dismantled.

## **Setting Up The Die Molds (1)**

### **STEP 1**

- Dismantle the hopper by unscrewing the large spring loaded nut under the mold platen.
- Loosen the nut under and on the left of the platen.
- Grip the mold platen at the rear and lift it out.
- Loosen screw (2).
- Insert the lower punch into the hole in the die mold making sure the triangle on the lower is facing forward.
- Tighten screw (2).
- Loosen screw (1) on the dismantled mold platen
- Insert the middle die mold into the cavity on the dismantled mod platen.
- Tighten screw (1).
- Reinstall the mold platen
- The lower punch should be aligned with the hole in the die mold.
- Loosen the large nut over the die mold.
- Use the handle to raise the large nut and insert the upper punch into the hole in the nut.
- Tighten the large nut but it must not reach the nut above it. Use one spanner to hold the upper nut in place and the pliers to tighten the lower nut.
- With great care fix the mold platen into position so that the upper punch is aligned perfectly with the hole in the die mold.
- Lower the upper punch into the hole in the die mold.
- Replace the nut under the mold platen and tighten with a spanner.
- Replace and tighten the nut at the other side.
- Swing the hopper back into position and align the screw holes.
- Turn the machine round. To refit the hopper, refit the spring loaded nut under the platen using two hands to make sure the shaft goes into the hole in the moving plate above the platen. Setting the die molds is now complete.

### **Note**

Before using the machine turn the handle several times to check all the moving parts run smoothly.

## **Dismantling The Die Molds (1)**

- 
- Dismantle the hopper by unscrewing the large spring loaded nut under the mold platen.
  - Loosen the large nut over the middle die mold.
  - Turn the handle anti clockwise until it reaches its highest position to raise the upper punch to its highest position.
  - Using a pair of pliers, grip and remove the upper punch with a downward movement. If it is tight, tap your pliers with another tool.
  - Loosen the nut under and on the left of the mold platen.
  - Turn the machine round and loosen the nut on the other side.
  - Grip the mold platen at the rear and lift it out.
  - Loosen screw (1) on the face of the mold platen.
  - Push out the die mold from underneath.
  - Loosen screw (2) under screw (1).
  - Lift out the lower punch.
- Dismantling the die molds is now complete.
- Insert the middle mold into the hole in the mold platen.

### **STEP 3**

- Loosen the large nut over the middle mold.
- Insert the upper punch.
- After inserting the upper punch use the handle to carefully lower the large nut onto the upper punch. It will stop by itself. Using two fingers push the upper punch upwards until it will not go any further.
- You will now need one spanners and a pair of pliers.
- Tighten the large nut but it must not reach the nut above it. Use one spanner to hold the upper nut in place and the pliers to tighten the lower nut.

### **STEP 4**

- Turn the machine round. To refit the hopper, refit the spring loaded nut under the platen using two hands to make sure the shaft goes into the hole in the moving plate above the platen.
- The die mold is now set.

### **Dismantling The Die Molds (2)**

- Dismantle the hopper as before by unscrewing the large spring loaded nut under the mold platen.
- Loosen the large nut over the middle die mold.
- Turn the handle anti clockwise until it reaches its highest position to raise the upper punch to its highest position.
- Using a pair of pliers, grip and remove the upper punch with a downward movement. If it is tight, tap your pliers with another tool.
- Loosen the screw (1) on the face of the mold platen.

- Insert a long handled Allen key into the space under the die mold and push the die out.
- Loosen screw (2) under screw 1.
- Remove the lower punch by gripping it with a pair of pliers and raising it by turning the handle.

The mold die is now dismantled.

## **Maintenance**

1. Lubricating oil should be added to the lubricating points and surfaces before each use.
2. When a batch is finished the remaining powder or granules should be removed from the machine. Brush any residual powder from the machine and apply pharmaceutical grade grease.
3. If the press has not been in use for more than one week, remove the punch and die, and wipe the machine clean. Apply pharmaceutical grade grease or white lithium grease to the smooth surfaces of components. Cover it and put it in its container.

## **Cautions**

1. To avoid injury never put your fingers between the dies.
2. Make sure that the materials are in granular form before punching tablets.
3. The equipment must be fixed securely to the workbench using the screws provided.