Manual for GlobePharma Mini-Press II
Rotary Tablet Press

Preparing the Rotary Press

1. Make sure the rotary press is unplugged.

2. Open the bottom cabinet of the rotary press and take out the grey tool kit, and the beige box of punches and dies.

3. Take the large lid off the top of the press and remove the gravity hopper (large funnel on top)

4. Open the glass windows and secure them in the up position.

5. Remove the gravity feed frame (brass coloured) and set aside with the black twist knobs

6. With the large allen key from the grey toolbox, remove the feeder mount plate.

7. Unscrew and remove the turret guards by unscrewing the fastening knobs and rotating the guards towards the left of the machine. Careful not to knock any wires out while doing this. The turret guards are most easily removed/installed at the rear left post of the machine, then rotated to position.
Inserting the Dies

8. Open and remove the right side cabinet door of the rotary press.

9. Lift off the small access port cover for the lower punch.

10. Locate a matched set of lower + upper punches, with the correct sized die. Each punch is matched top and bottom. The die with the longer shaft (the pointy skinny end) goes on the bottom.
11. Rotate the desired die hole to the die insertion plate by turning the navy blue motor shaft directly (located in the open right cabinet of the machine).

12. Wipe the die seat where the die is to be inserted with a suitable cloth. Wipe the outer surface of the die. If the surfaces are not clean, the die will not seat properly in the hole.

13. Smear the outer edges of the die lightly with the grade of oil used for punch body lubrication.

**IMPORTANT NOTE ON HANDLING THE PUNCHES**

PUNCHES ARE DELICATE and need to be handled carefully.

Do not drop or hit them as the sharp edges of the punch can easily be damaged.

A damaged edge can cause a punch being stuck in the die and in some cases the misalignment due to the damage can cause the punch being caught at the edge and broken during tablet compression. This can result in damage to the machine or bodily injury.
14. Insert the die into the die bushing upside-down (writing on the down side). The bushing is used as a guide. Place close to the die seat. Put pressure on top of the die with your finger, and slide the bushing over the hole until the die falls into place.
15. Open the small access port cover for the upper punch, located at the top of the machine. There are two die installation rods, one long one (steel) and one short one (brass). You can use either one to tap the die into the die seat until the sound changes, and the top of the die is perfectly flush to the top of the die seat. If the die isn’t flush, this will damage the machine.

- If you use the longer punch installation rod, you will need to insert it through the upper punch access port at the top of the machine
- You can use the inner insert of the bushing to clean the die seat. Insert the clean-out tool into the die seat, apply pressure downwards and rotate the tool.

16. Remove and lightly oil the black die lock screw. Install and tighten the black die lock screw to secure the die. Do not use excessive force (no more than 14 foot pounds). A torque wrench can be used.
17. Rotate to the next die hole using the navy blue motor shaft. Rotate the navy shaft by turning it towards you. To align the station to the access ports properly, align the right side of the upper punch bore to the right side of the upper punch loading take-off piece.

18. Repeat this procedure for all the dies.

Make sure the dies are flush at every station, and all the black die lock screws are secured and not protruding. Otherwise, this will damage the equipment.

**Inserting the lower punches**

19. Ensure the punch, and the lower punch hole is clean.

20. Lubricate the lower punch:
   - The grease is used to lubricate the crown (the knobby end) and the underside of the crown.
   - The light oil (spray bottle) is used to lubricate the shank, that slides in the turret guide bores
   - Lubricate with your fingers. Do not over-lubricate. Only a thin film is required on the mentioned parts.
21. Rotate the barrel to station 1. Guide the lower punch through the lower punch access port and push it up through the die.
   • Ideally, the punch should fall back down back through the die smoothly under its own weight.
   • Try not to touch the punch to anything but the die head, or it will get dirty.

![Image of the punch moving through the die]

22. Unscrew the leaf spring for the lower punch and rotate it to expose the hole. Insert a white plastic retaining plug. Rotate the leaf spring over the plastic plug and tighten.

![Images of the leaf spring being adjusted]

23. Turn the navy blue motor shaft to align the access port to the next station. Rotate the navy shaft by turning it towards you.

24. Repeat this procedure for all lower punches, going in the order from station 1 to station 10.
25. Replace the small access port for the lower punch. You may need to raise a lower punch to do this. Replace the small access port for the upper punch.

26. Re-install the turret guards. There are divets on the turret guard ends for where the red wire fits through.

Make sure the bottom punches do not extend above the top of the die holes at any point in the rotations. Otherwise, this will damage the feeder assembly.

Inserting the upper punches

27. Remove the upper punch-loading take-off plate using a black allen screwdriver in the tool chest.

28. Lubricate the upper punch using the same method described for the lower punches.
29. Load the upper punch where the take-off piece was, into the upper punch guide bores.
   - Make sure the punch is free to move in its guide bore and capable of dropping under its own weight onto the cam body when lifted up an inch or two.
   - Make sure the upper punch is aligned into the upper punch groove.
   - You will have to hold the punch in position while turning the shaft or it will fall down.

30. Turn the navy blue motor shaft to the next station. Rotate the navy shaft by turning it towards you. Install in the order of station 1 to station 10. Repeat this procedure for all stations, and replace the upper-punch loading take-off piece.

**Final Touches**

31. Replace the feeder mount plate. Apply pressure towards the turret while tightening the screws with the allen keys. It should be flush with the turret.

32. Replace the gravity feeder assembly. Hand tighten.
Final Touches

33. Replace the gravity hopper on top, and the large lid.

34. Replace the right side cabinet door. Make sure the pins on the bottom of the case go into the holes in the bottom of the cabinet door for it to close properly.

35. Plug the rotary tablet press in using the electrical plug adaptor. The unit uses the 220V power plugs by the fumehoods in PHC860. Plug the sensor in to a regular 115V plug.

36. Turn on the main power using the red switch on the left side of the machine (it’s on a yellow base).

37. Press the reset button.

38. Attach the tabletting press laptop to the press via USB. Turn on the laptop.

39. Run the program “Tablet Press DAQ”. Login, and set the program to acquisition. User name: “user”, password: “reset”.
While Tabletting

- Adjust the pre-compression to desired value. This is done with a ratcheting action. The direction of ratcheting is changed by rotating the knob at the end of the black rod.
- Adjust the compression/hardness to desired value.
- Adjust the motor speed to desired value.
- Adjust the gravity hopper using the set screws at the base to adjust the powder flow.

Clean-up Procedure: Rotary Tablet Press

1. Turn off and unplug the machine.

2. Vacuum out the powder from the top of the turret, the gravity hopper, and all obvious places.

3. Remove the large top lid and gravity hopper.

4. Follow steps 1-7. Clean and wipe each component with paper towel and 95% ethanol solution.

5. Remove the right side cabinet door, and the upper punch take-out plate.

6. Remove the top punches:
   - Remove the lower punch access port cover.
   - Rotate the turret to the first station.
   - Loosen the black die lock screw with an allen key.
   - Insert the longer punch installation rod through the lower access port.
   - Rotate the navy blue shaft and align the next station to the access ports.
   - Repeat for each punch.
Clean-up Procedure: Rotary Tablet Press

7. Remove the bottom punches:
   - Rotate the turret to the first station.
   - Put your hand under the lower access port (to catch the punch when it falls).
   - Loosen the leaf spring for the lower punch with an allen screwdriver. Remove the white plastic retaining plug. If the punch does not fall, pull it down towards the lower punch access port until it falls into your hand. Remove the punch and set aside.
   - Rotate the navy blue shaft and align the next station to the access ports.
   - Repeat for each punch.

8. Remove the dies:
   - Align the first station to the lower access port.
   - Loosen the black die lock screw so that it is flush with the barrel.
   - Insert the long die installation rod through the lower access port and tap the die gently upwards, until it pops out.
   - Rotate the navy blue shaft and align the next station to the access ports.
   - Repeat for each die.

9. Clean all removed punches and dies by wiping with 95% ethanol, and store in the beige box.

10. Clean all the die bore holes with ethanol and paper towel.

11. Replace the small access port for the lower and upper punches.

12. Replace the turret guards and feeder mount plate.

13. Replace the right side cabinet door, and the upper punch take-out plate.

14. Close the glass windows, replace the gravity hopper and large machine lid.

15. Return all the tools and lubricants to the grey toolbox. Place both boxes in cabinet below machine.