Manual Roller Press Machine AOT-MRP-100

Operation Manual

First of all, thank you for using our products. Please read the instruction manual carefully before using this equipment.

Model：AOT-MRP-100

Introduction：This machine is mainly suitable for manual rolling of battery materials, a small amount of precious metal materials such as gold and silver, and non-ferrous materials such as copper and aluminum in the laboratory. It is especially suitable for thinning and increasing the density of lithium battery electrodes of clean energy materials. The machine adopts gear transmission to realize the pressing of the rollers, the rolling thickness can be adjusted, and the use is convenient.

Main Parameters：

*The roller has high hardness, and the surface is plated with hard chrome, the hardness can reach HRC60～62, and it is rust-proof.
*High rolling precision, tolerance ≤±0.005mm.
*Add a transparent protective plate for safe use.
*Vertical design, convenient for feeding and rolling of sheet and strip materials.
*Adopt gear meshing rotation to realize roller pressing.
*The thickness and speed of the tablet can be adjusted, and the appearance is exquisite and beautiful.
* Small size, easy to operate, flexible and fast to use.

Working principle

By turning the hand wheel, the upper roller produces downward pressure, and the battery electrode sheets placed on the lower roller are flattened.

The gap between the pressing rollers is mechanically adjusted, so that the electrode sheet is formed under pressure and the density of the battery electrode is increased.

Operation procedure

Figure 1

***Rolling method**

Put the material between the two rolls, manually turn the hand crank, and the gears mesh to drive the two rolls to rotate to realize the roll-to-roll calendering.

***Rolling thickness adjustment method**

Rotate the adjusting handle on the left and right sides to adjust the rolling gap to an appropriate position. The plug gauge (already configured in the packing box) can be used to check the size of the gap and whether it is balanced.

Note: The left and right adjustment handwheels should be adjusted in a balanced manner to avoid damage to other parts.

***Install dial indicator**

Insert the dial indicator into the installation hole as shown in Figure 2, and the value of the dial indicator should be displayed at about 1.0. Slightly tighten the Kimi screw on the side to prevent the dial indicator from loosening, and hold the probe rod with your hand to move up and down smoothly for correct installation (do not tighten it too hard to prevent the top of the dial indicator from jamming the probe rod).

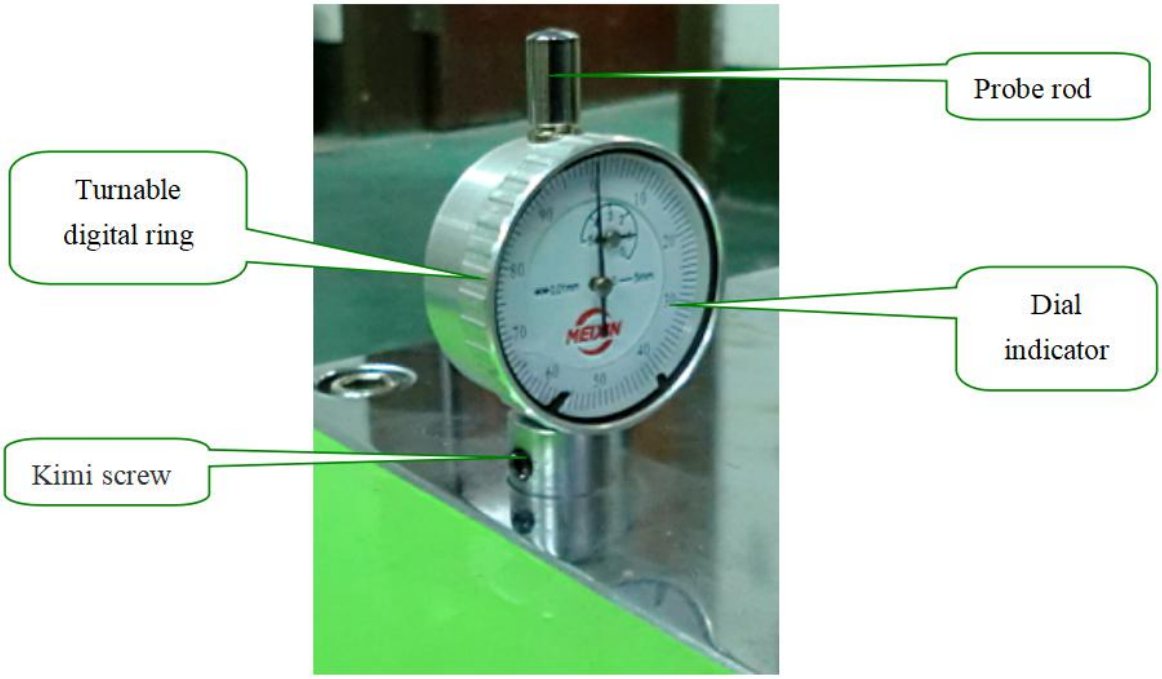

Figure 2

Technical Parameter

*Roller diameter: 2～Φ96mm
*Roller surface hardness: HRC60～62
*Roller finish: above 0.8
*Rolling thickness: 0～2mm adjustable
*Tablet width: 0～100mm
*Roll placement: vertical placement
*Operation mode: manual
*Feeding speed: 0～40mm/s depends on the speed of hand cranking
*Overall dimensions: L350mm*W240mm*H350mm
*Equipment weight: 45KG

Standard configuration

* 1 set of hexagon wrench,
* 2 dial indicators,
* 1 feeler gauge

Maintenance methods and precautions

1. Carefully wipe the surfaces of the two rollers with a soft cloth dipped in alcohol before each work to keep them clean.
2. Lubricate the moving parts of the gears to keep the movement smooth.
3. Air pump purging is disabled to prevent dust from entering the bearing and affecting the use accuracy.
4. If it is not used for a long time, wipe the surface of the roller clean, and spray the surface with anti-rust oil to protect the roller surface from erosion.

5. Regularly check the screws, nuts, pins and other fasteners of each part of the machine to check to prevent loosening and prevent machine quality accidents and personal accidents.
6. When adjusting the rolling gap, the small handwheels on both sides should be adjusted evenly to avoid damage to other parts.

Safety operating procedures

1. During operation, it is strictly forbidden to stretch hands and other parts into the dangerous area of the roller and gear transmission to cause personal injury. During operation, two or more people are not allowed to operate to avoid accidental injury.
2. When wiping the roller, stand behind the operating surface to wipe, to prevent the wiping cloth and hands from being involved, causing personal and machine injuries;
3. It is strictly forbidden to wear gloves to wipe the rotating machine.
4. The operator must wear tight clothes, and those with long hair must wear a work cap.
5. External technical personnel and external designated personnel cannot disassemble and debug the equipment arbitrarily.