

## Operation Manual about V-cut Thickness Meter



1. Machine name: V-cut Thickness Meter SM-400L250
2. Machine Description

This equipment is especially designed and produced to measure the WEB thickness after PCB V-cuttings on top and bottom side.

Top blade and bottom blade travel are adjustable to suit your PCB with different dimension.

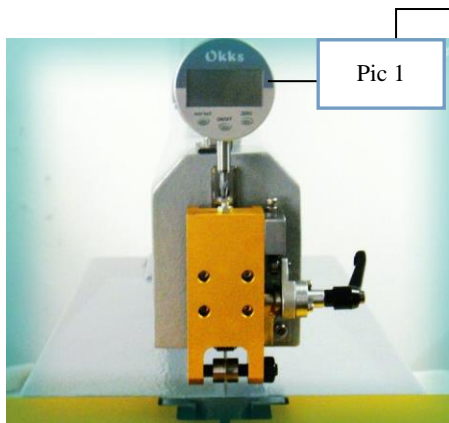
The blade and watch have long-service life.

### 3. Specification

<b>Brand/model</b>	<b>Southern Machinery: SM-400L250</b>
<b>Platform size( X*Y):</b>	<b>Max.250*400mm</b>
<b>Precision data on LCD</b>	<b>About 0.01mm</b>
<b>Raw material of blades</b>	<b>Steel of high quality</b>
<b>Blade thickness</b>	<b>Min.0.15mm</b>
<b>Top blade travel</b>	<b>About 8mm(adjustable)</b>
<b>Max blade travel</b>	<b>Top blade and bottom blade can touch each other</b>
<b>Measurement Unit</b>	<b>Convertible between metric and imperial</b>
<b>Equipment size(L*W*H)</b>	<b>500*500*390mm</b>
<b>Equipment weight</b>	<b>About 13KG</b>

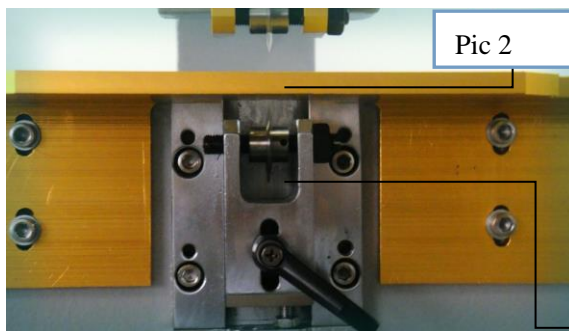
#### 4. Operation Detail

- (1) Open the dial indicator: Keep pushing the button 'ON/OFF' until there is a number. The push the button 'ZERO' to reset.



→ Dial Indicator

- (2) Correction of the origin: Operate the swing handle of the upper knife holder and use it to gently drop it to align the upper knife with the lower knife edge. If the number displayed on the dial indicator is not "0.00", you need to press and hold the Zero button to reset.



→ **Top Blade (should be aligned)**

→ **Bottom Blade**

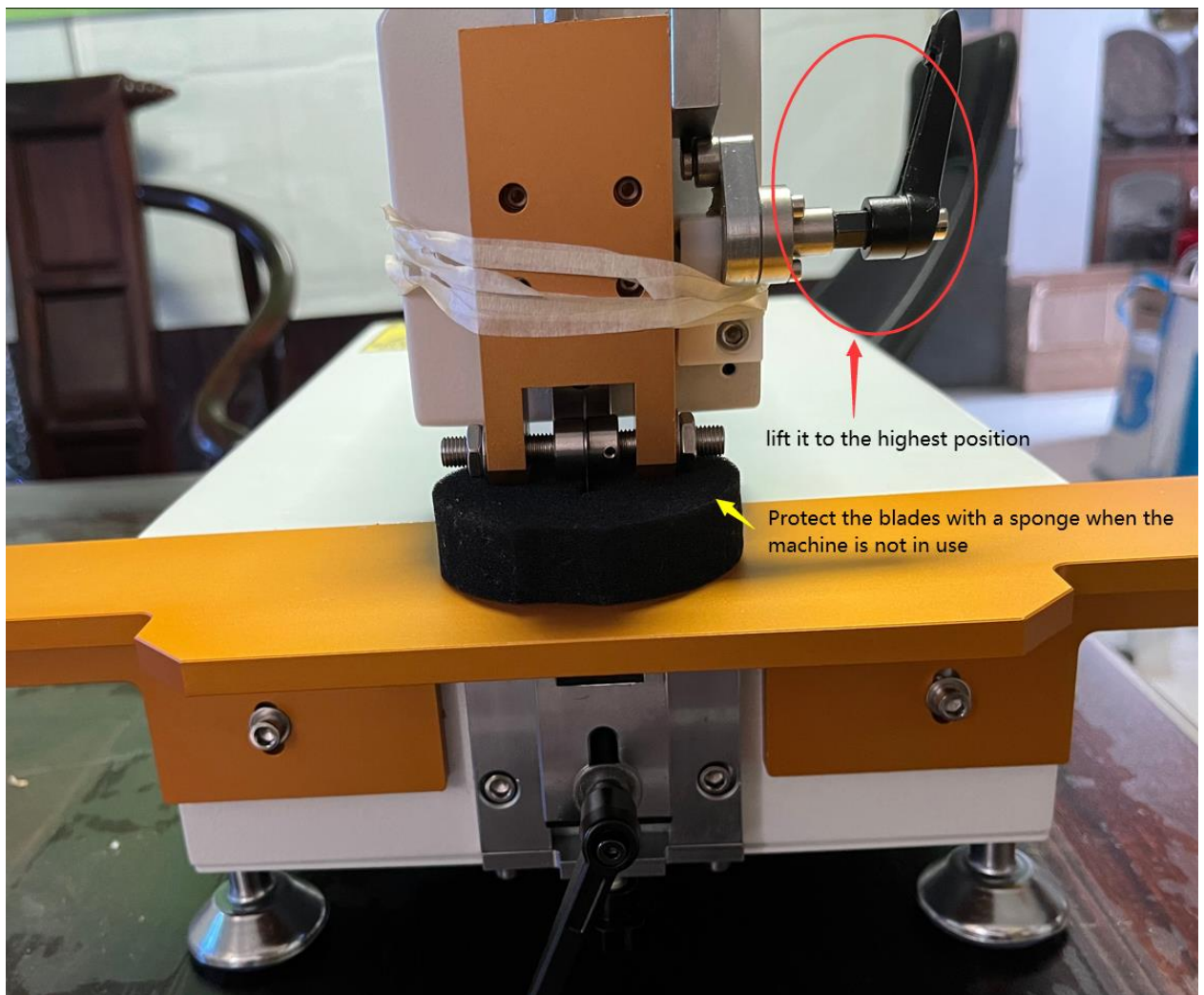
- (3) V-cut test: Lift the top blade holder and then align V-cut slot with bottom blade. Then pull down top blade holder. Then you can get the WEB thickness on the dial indicator. Push the button 'INCH' and it is convertible between metric and inch.



→ (Blade should be aligned with

V-cut)

- (4) Lift top blade holder to the highest position. Protect the blades with a buffer stuff like 5mm sponge (below picture) when the machine is not in use.



- (5) Turn off dial indicator: Keep pushing the button 'ON/OFF' until no number on the screen.

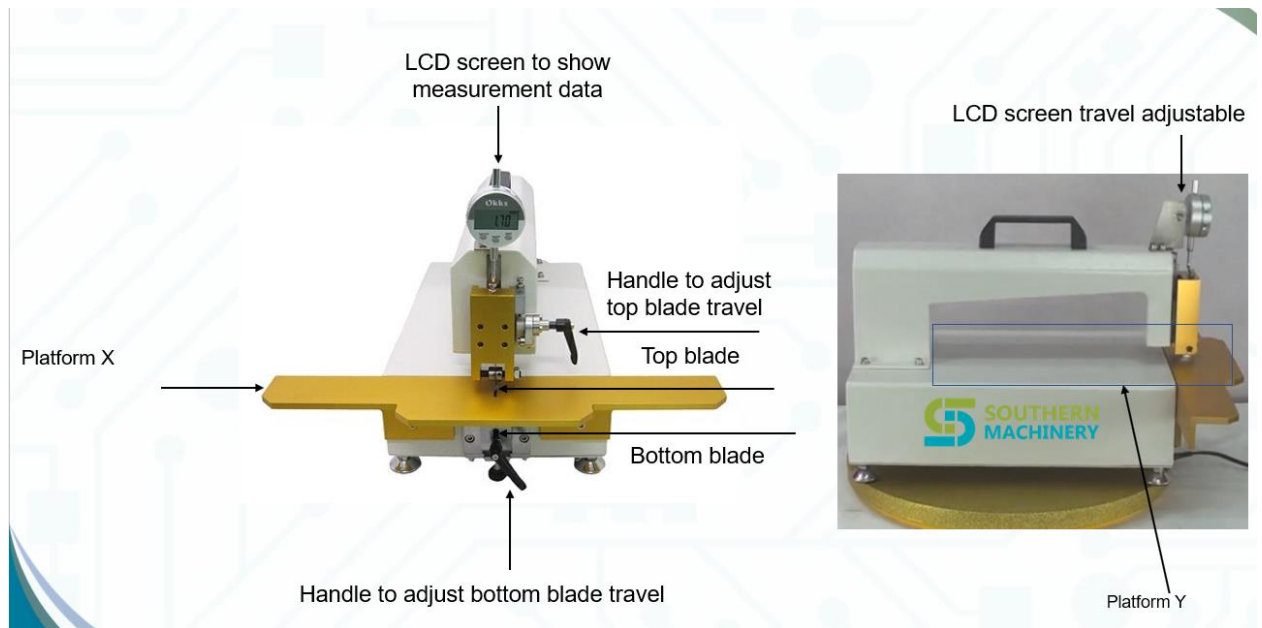
When machine is not in use, kindly turn off the dial indicator.

Battery maintenance tips: If machine will not be in use for a long time, kindly take out the battery off the dial indicator.

Click the link to learn how to take out the battery and install a battery.

<https://youtube.com/shorts/6nfWVrYsXsg?feature=share>

## Machine Structure:



## 5. Machine Calibration and Special Notes

- (1) **Tool alignment adjustment:** When it is found that the upper knife and the lower knife edge are not aligned when calibrating the origin, it needs to be adjusted. The tool screws of the upper knife seat and the lower knife seat can be adjusted to any one group (based on the other group), use a word Adjust the screwdriver until the tips of the two cutters are aligned on the same line.
  
- (2) **Origin calibration:** When the dial indicator shows a value greater than " $\pm 0.02\text{mm}$ " during measurement using the standard, the machine origin calibration is performed, and the fine-tuning screw of the upper tool seat is adjusted to make the upper and lower tool tips contact each other, and then press Reset the Zero button on the dial indicator to display "0.00", and then use the standard block to measure until it is adjusted to the value of the standard block.
  
- (3) **Special Notes:** Do not use too much force when calibrating the origin in the air measurement to avoid damage to the blade and affect the measurement accuracy. At the same time, after the measurement is completed, the upper blade holder should be placed at the highest position and a soft piece of paper should be placed between the two to avoid collision of the tools.