

## NCP-25 Numerical Control Precision Press

### Operation Manual

#### Preface:

Before using [NCP-25 Numerical Control Precision Press](#), please read this book carefully, and make sure that you have paid enough attention to this book. By using this machine properly, you cannot only avoid accidents, but also prolong the life of the equipments. So please do give your attention to the operation. To make this machine work to its best, you should do as the below.

1. Please do read this book carefully and make sure that you have understood it well, and then you may carry on operation, maintenance as well as attendance.
2. If you want to transfer this machine to someone else, please transfer this book together.
3. Please keep this book where you can get at any moment, and put it in good condition.



#### Safety handling

1. The following: ⚠ The dangerous , ⚠ definition warned , ⚠ Notice , ⚠ Consulting is as follows:

⚠Dangerous: Expect wrong operation , will cause attendant's death or severely injured dangerous situation;

⚠Warn: Expect wrong operation , will cause the dangerous situation of attendant's sustaining a severe injury or slight injury;

⚠Notice: Expecting wrong operation, will cause the dangerous situation that personnel sustain a slight injury or damage

⚠Consult: Precautions while having something to do and operating, maintaining.

2. Please observe the warning item recorded of a book. The warning mark stuck on this plane is from warning very important project selected in the item.

#### 1-1 BEFORE INSTALLING:

##### ⚠ WARN

When hang the machine, Please confirm the machine rings become flexible to get up. In addition, when hanging , please pay attention to the machine sloping to get up

**1-2 BEFORE OPERATING:****⚠ WARN**

1. This machine assembles the end special-purpose machinery on the terminal station of electric wire. So should not use the one machine to carry on other pressures to process.
2. Can't transform machinery, transform control circuit, etc.
3. Should not pull down the safety device or the back cover and change the position that is installed
4. In order to guarantee the security, must put through the ground wire.

**1-3 WHILE OPERATING:****⚠ WARN**

- ⚠ Never operate the machine without the safety cover guard and back cover to prevent injury at hand and face.
- ⚠ At the starter motor, should make sure the Top Dead Point ,In addition, must take down L-BOX WRENCH.
- ⚠ Switch off the machine and disconnect it from the main power line before to install the applicators or servicing the machine.
- ⚠ Regulate curly height of terminal, must disconnect power, and contact cutter directly to take care.
- ⚠ If two RAM phenomena take place while operating, Should stop operating immediately, and improve dealing with it.
- ⚠ While removing the waste material in the cutter, must disconnect the power, must use the manual tool to remove.

**1-4 MAINTENANCE****DANGEROUS**

Should pay special attention: When handle, Can't pull down and touch the control circuit, Otherwise have danger of getting an electric shock.

**WARN**

When just finishing the work, The temperature of the motor is still quite high, So should notice that don't touch with hands.

**NOTICE**

In case of assistance on the electronic parts of the machine control to disconnect the machine from the power supply line and waiting 10 minutes after the led power is switching off before to remove the electrical box cover or operate on the clamps.

Hear belts and take the wheel to grit sound in the starter motor, Please adjust the elasticity of the belt in time.

## Specification

Model:	NCPP-25
Pressure:	24.5Kn
Height	240mm
Press stroke	40mm
Voltage	AC220V/ 50Hz
Motor	380V/ 1.5Kw
Weight	80Kg

## Design Demand of the Control System and Correlation Parameter

### 1. Summarize.

Crimping machine is a kind of punching equipment, which is widely used to connect wires with terminal. Its working principle is the same to the normal punching machine. (Actually, the crimping machine is a precise punching machine with high speed and perfect function). The working principle is that: circling motion of the crank lead the punch to make reciprocal action vertically. Running a circle of the crank is one circulation. The action of the punch from top dead center to lower dead center is called punch stroke. The action of the punch from lower dead center to top dead center is called resetting stroke. The punch stroke and the resetting stroke form a circulation. The working process of the crimping machine:

- 1-1. Adjust the position and the clearance between the applicator and the punch, to form a good state.
- 1-2. Keep the punch in the position of top dead center.
- 1-3. Feed the wire, fixing to the applicator.
- 1-4. Let the punch make a punching stroke, connect the wire with the terminal.
- 1-5. Let the punch make a resetting stroke, then, get out the feeding.
- 1-6. Repeat acting which is said above.

### 2. Working state of crimping machine

#### 2.1. Continuous punch

##### 2-1-1.no pause continuous punch

When the time of feeding and the time of a circulation of the punch match well, the crimping machine makes continuous punch.

##### 2-2-2.continuous punch with pause

When the time of feeding is longer than the time of a circulation of the punch, the punch will pause in the position of top dead center. After the pause, the punch makes a punch stroke.

#### 2-2. single punch

2-2-1. When feed artificially, punch is controlled by the foot pedal. The punching machine makes one circulation through one stamping of the foot pedal.

##### 2-2-2. advance/recede gradually

The function of advance/recede gradually is that: the punch stroke from top dead center to lower dead center is "H". While stamping one time of the foot pedal, the punch's acting stroke is "H"/"X".

The function of advance/recede gradually is used to adjust the position and the clearance between the applicator and the punch.

### 3. Design demand of the control system and correlation parameter

#### 3-1. Correlation parameter

3-1-1.power 1.5KV

3-1-2.motor rotate 1400circle/minute

3-1-3.motor to transmission is 1:7.5 (when the motor function 7.5 circle, the crank makes one circulation.)

3-1-4power supply AV20V 50HZ

### Function:

<SET> press this key, then you can set the program

<CON> press this key, the machine press the terminals continuously

<SGL> press this key, the machine press the terminals single.

<TEST> press this key, to test and modify the applicator

<RST> press this key, to clear away the error input numeral value

<MOVE> press this key, to shaft the cursor

<+>/<-> press this key, to set the numeral value accordingly

Red button: stop the machine at once.

Green button: on/off switch

### Operation:

Switch on the machine, first of all choose the <CON>,then press <SET> to input the press speed(<VOLT 1-3>), to press <MOVE>to shaft the cursor, in order to set the time between the two <PAUSE>,to press <.MOVE> to set the <BATCH>,after set all of this, press two times <CON> is ok. The set of <SGL> is the same as <.CON>.

### The control of the work state

1. The work state is four classes in total

1-1-1. continuous punch

A. stamping the foot pedal, the machine makes continuous punch. When stop stamping, the punch stop.

B. stamping the foot pedal, the machine makes continuous punch. When reach the binding amount, the punch stop automatically.

1-1-2. continuous punch with pause

A. stamping the foot pedal makes continuous punch with pause. When stop stamping, the punch stop.

B. stamping the foot pedal makes continuous punch with pause. When reach the binding amount, the punch stop automatically.

C. Single punch

a. Stamping the foot pedal, the punching machine do one circulation.

D. Now

a. Stamping the foot pedal, the crank act slowly. Loose the foot pedal, the crank stop acting.

b. Stamping the foot pedal, the crank makes 1/10 or 1/12 circulation. The speed is 24 circles/minute.

2. Speed

Transducer has 4 kinds of different degree, when 3 of them are for punching and the other is for <NOW>.

2-1 Punching state

1<sup>st</sup> degree: 225times/minute

2<sup>nd</sup> degree: 175times/minute

3<sup>rd</sup> degree: 125times/minute

2-2 Now state

NOW, SLOW, 12circles/minute.

When press the key of, <TESTING>, the display shows the kind of degree automatically.

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