

# How do automatic labeling machines work?

## Introducción detallada :

Nowadays, the labeling of goods through automatic labeling machines has become an indispensable part of the production process of goods. There are many materials and shapes of commodity labels, many types of varieties of objects to be labeled, the requirements for labeling are all different, and the requirements for labeling speed are increasingly high.

## From manual labeling to automated labeling

To free up the workforce, labeling machines have been produced, which have improved many aspects of production. The labeling machine is a fundamental guarantee for the mechanization and automation of product packaging, and therefore has a very important role in modern industrial production.

An automatic flat labeling machine is a product on the plane of the sticker label automatic labeling machine. Such instruments can be directly connected to the production line, automatically complete the production, delivery, product positioning, labeling out of the label, labeling, label stroking, finished products output, and other work. Although the labeling machine and manual labeling, compared to both the labeling accuracy and efficiency, have been greatly improved, the current development of automation in society, the current labeling machine labeling speed is still not able to meet the needs of social development. We need to invent a more accurate and the efficient labeling machine, which requires the improvement of the labeling machine structure and the optimization and reform of the electronic control method.

A conventional stepper motor replaces the labeling machine produced by Shanghai Han Yi with a servo motor, which has a more accurate step, making the labeling machine's output speed and conveying speed more stable and higher. The system uses PLC control technology, whose control logic is placed in the memory program. To change the control logic, you only need to change the program. The system has fewer connections, is small, consumes less power, is faster, and uses semiconductor integrated circuits for timing. Clock pulses are generated by crystal oscillation, with high precision, wide timing range, easy modification, and not affected by the environment.



What requirements should the labeling machine meet ?

1. Self-adhesive labels can be reliably applied to the upper surface of the carton.

To fulfill this function, the system must perform the following operations. The transport and accurate positioning of the carton to be labeled; the precise feeding of the self-adhesive label to the labeled material; the peeling off of the label from the labeling tape; the firm attachment of the label to the carton; and the smooth output of the finished product after the label has been applied.

2. The labeling machine requires fully automatic continuous labeling.

The operations in the labeling process are performed continuously and automatically, without human intervention, and the control system allows for coordinated control and continuous execution of the

individual operations.

### 3. To have low design and manufacturing costs.

The use of sensors, servo motors, speed control motors, PLC, fuses design circuit, the use of a small motor with a reasonable, reduce the entire labeling machine design and manufacturing costs, so that they have a good promotion.

### 4. The labeling machine should have a compact mechanical structure.

We need to simplify the transmission device of the labeling machine. According to the control mechanism of the PLC and the movement characteristics of the speed control motor and servo motor, the layout of the mechanism of the labeling machine is reasonably arranged. This will make the designed labeling machine compact, occupy little space position, and is easy to use.

In the next article, we will introduce the structural design of the labeling machine and the implementation of the control system. If you are interested, you can [click here](#) to view it directly.

The machine introduced today can be directly connected to the production line or used as a stand-alone labeling machine with 60 pieces/min labeling efficiency and accuracy of  $\pm 0.1$  mm. Its labeling head is adjustable up and down, front and back, adapting to the labeling needs of workpieces with different specifications. If you want to know more about it, please get in touch with us.