

THE DIFFERENCE BETWEEN PRECISION LASER DIE CUTTING MACHINE AND TRADITIONAL DIE CUTTING MACHINE

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At present, the application of high-precision [die-cutting machines](#) in the sales market is not very extensive. The die-cutting and technology of traditional mechanical equipment are still deeply loved by people. Today, the application of high-precision die-cutting machines in the production, processing and manufacturing of paper packaging products As an example, analyze the advantages and technical characteristics of high-precision die-cutting machines!

First, let's start with traditional die-cutting techniques. Traditional mechanical equipment die-cutting releases the necessary working pressure according to the printing plate to roll promotional materials or cardboard into a specific appearance. If all the promotional materials are pressed into independent graphics, it is called die-cutting, and if it is pressed on the printed matter with a steel wire, or a curved groove is left, it is called indentation. So what problems do you often encounter in the whole process?

1. The accuracy is not good

The reason for the low die-cutting accuracy is the problem of the die-cutting version number itself, and it is also a problem of promoting the product. The error of the hand-made die-cutting plate is very large; the die-cutting indentation is different from the natural environment of the whole process of packaging and printing, which will cause the shape of the paper to be deformed, resulting in the prohibition of the die-cutting indentation, especially after waxing and coating, the shape of the paper will be deformed Seriously, it endangers the precision of die-cutting.

2. Die-cutting indentation causes explosive lines and open lines

The reason is that the bursting line refers to the excessive indentation pressure, which exceeds the bearing limit of the paper-type fiber, causing the paper-type fiber to break or partly break; Improper selection leads to poor quality of the paper type, the azimuth angle of the chemical fiber of the paper type is different from the typesetting azimuth angle, the moisture content of the paper type is low, and the elasticity is poor.

3. There are burrs on the die-cutting edge

During the die-cutting process, the laser-cut edges of die-cut products are often not smooth, and some laser-cut edges where the pilling edge is very close to the creasing line are more serious. This is because when the mold is tightly combined with pressure, the sealing strip and indentation steel wire on the mold plate generate tension on the paper shape, and the paper shape is torn by the tension when it is not completely cut, and burrs appear.

4. The connection point is too large

The end users of color box packaging always stipulate that the connection point is getting smaller and smaller, and the manufacturer always makes the equipment run faster, which increases the difficulty factor of the operator. In order to ease the difficulty factor, the connection point should be at the support point, and it must be hit with a wire grinder. Hard sealing strips or cork boards must be used on the knife edge of the connection point to prevent the connection point from breaking and making the connection point smaller and smaller.

Compared with traditional die-cutting machines, high-precision die-cutting machines have the following characteristics;

1. High quality and high precision.

With the development trend of die-cutting technology and high-precision technology, combining the two and replacing traditional die-cutting with high precision has significant advantages. The precision die-cutting machine is fully automatic high-precision laser cutting with no vibration error and stable precision. There is no need to make a tool mold, and the computer can immediately operate high-precision laser cutting without being limited by the complexity of the pattern. Laser cutting is necessary for laser cutting that cannot be done with traditional tool molds.

2. There is no need to change the plate, and the efficiency is high.

Because the high-precision die-cutting technology is directly operated by the computer, it can quickly convert different styles of jobs without disassembling and replacing the die-cutting die, especially in the suitable short and humanized die-cutting process, which saves traditional Die-

cutting die removal, replacement and adjustment time. The high-precision die-cutting machine has the characteristics of non-capacitive barrier, quick replacement, short production cycle and high production efficiency.

3. It is possible to create laser cutting graphics on the computer, and the parameters of various graphics can be set and converted automatically by the mobile phone software. Therefore, the high-precision die-cutting machine is easy to understand and practical, and requires less professional skills for operators. The high level of mechanical equipment automation technology reduces the labor efficiency of operators. When laser cutting together, the operator does not need to operate the job immediately, and the safety factor is good.

Since the high-precision die-cutting machine can store the laser cutting program flow programmed by the computer, it only needs to adjust to the corresponding program flow to carry out laser cutting during remanufacturing to ensure repeated production and processing.

4. Low application cost in the middle and late stages.

The cost of precision die-cutting technology includes the cost of mechanical equipment and the application cost of mechanical equipment, while the cost of traditional die-cutting technology includes the cost of manufacturing die-cutting, the cost of processing mechanical equipment, the cost of traditional die-cutting mechanical equipment, the cost of adjusting manual services cost and the cost of waiting time. Manufacturing die-cuts is very expensive for traditional die-cutting techniques. For many small and medium-sized packaging and printing companies, the cost of post-press knife mold manufacturing ranges from 30,000 to 50,000, and ranges from 100,000 to 150,000. It is also necessary to have experienced die-cutting workers to carry out technical and professional installation and adjustment. In addition, the indoor space of the cutting mold must be stored, and various auxiliary software must have various uncontrollable wastes, and the application cost of the traditional cutting mold is getting higher and higher!

The emergence of new high-precision die-cutting technology will inevitably produce technological innovations in the production and processing of paper packaging products and the printing and packaging manufacturing industry, because the advantages of high-precision die-cutting machines can be widely used in various manufacturing industries, such as stickers, birthday cards, Candy boxes, self-adhesive labels, paper crafts, paper-cut paintings, gift box packaging, birthday cake

inserts, schedules and big red envelopes, etc. High-precision die-cutting technology is dedicated to the production and processing of packaging and printing paper packaging products.