COMPARISON OF LASER CUTTING PAPER PRODUCTS AND DIE CUTTING

Posted on 2023-07-05 by redsail

Category: Laser Cutter News

Paper laser hollowing machine is a new type of processing equipment specially developed for the paper product industry. With its unique design and high-performance configuration, it greatly improves the work efficiency. It has become an indispensable equipment in the paper product industry and gradually occupies the paper product industry. processing market. Compared with traditional handwork, the speed has been greatly improved. One person can operate multiple devices to reduce labor costs, save the cost of secondary mold opening, and use it for a lifetime with one investment. Design patterns can be arbitrarily, without graphics restrictions, and no need for one-time molding. Secondary processing.
It is a high-tech product that integrates laser technology, optical technology, precision machinery, electronic technology, computer software technology and refrigeration. Different from traditional contact machining, laser processing adopts non-contact form. The instantaneous extremely high light energy vaporizes the tissue on the surface of the processed material or burns part of the material through chemical-physical action to achieve the purpose of engraving a permanent mark on the surface of the material.

Paper laser hollowing equipment adopts aluminum structure, which is driven and controlled in the entire working area to achieve stable quality. The laser light path change is driven by two galvanometer motors (XY), and the third axis is driven by the pre-scan focus system to enable wide adjustment of the focus distance.

Comparison of Laser Cutting Paper Products and Die Cutting

1. The laser cutting process does not require mold opening, and any graphics can be designed on the computer, which saves a lot of time and cost, and has obvious advantages for small batch production and short delivery orders.

2. The incision of die stamping process is rough and stripped, which brings a lot of inconvenience to the next process, while the incision of laser cutting process is smooth and neat without wrapping.

3. After a period of use, the cutting die is prone to loss and deformation, which affects the accuracy. The laser cutting process can guarantee the accuracy of less than 0.01mm for different materials.

4. The die stamping process processes large-thickness elastic materials, which is easy to

collapse, and the cutting size deviation is large, while the laser cutting process will not produce any pressure deformation.

Advantages of Laser Die Cutting Hollow Technology

A new die-cutting technology, laser die-cutting technology has the characteristics of no longer waiting, willful freedom, and free expansion. In production, it does not need to be mold-making and standing, and one can also be die-cut; at the same time, it can die-cut any graphics, and the semi-transparent, full-transparent, and die-cutting depth gradients can be adjusted arbitrarily; in addition, laser die-cutting equipment can also be connected to digital printing machines Realize the digital automation of die-cutting and expand more fields.

In contrast, the traditional die-cutting process is a bit clumsy. Due to the need to make cutting dies, it is not only labor-intensive, time-consuming, material-consuming, and energy-consuming, but also has a long production cycle and is highly dependent on technicians. Once the product is changed, the cutting dies will become invalid. Therefore, in this link, laser die-cutting equipment wins the traditional die-cutting process.

In terms of cost, laser die-cutting technology is also superior to traditional die-cutting technology. The cost of laser die-cutting technology mainly includes equipment cost and equipment use cost, but the cost of traditional die-cutting technology includes the cost of making knife molds, proofing equipment costs, traditional die-cutting equipment costs, manual adjustment costs, time waiting costs, etc.
For traditional die-cutting technology, the cost of making knife molds is very expensive. For many small and medium-sized printing companies, the cost of post-press knife mold production ranges from 30,000 to 50,000 per year to as much as 100,000 to 150,000 per year. An experienced die-cutting worker is also needed to carry out professional installation and adjustment. also

Space for storing dies is required, various auxiliary tools are required, and there are various uncontrollable wastes. The cost of using traditional dies is higher!
In contrast, the cost of laser die-cutting technology is very low. The maintenance rate of the laser die-cutting engraving machine is extremely low. The key component - the laser tube, has a service life of more than 20,000 hours. It is 20000 ÷ 300 ÷ 8 ≈ 6-8 years. In addition to electricity, without various consumables, various auxiliary equipment, and various uncontrollable waste, the cost of using a laser die cutting machine is almost negligible!