



STEVEN SEPVEST CORP

INDUSTRIAL LASER SOLUTIONS PROVIDER

Daily Use Industry

- **Overview**

With the development of daily-use necessities, foodstuffs and pharmaceuticals, marking machine plays an important role on the production line. In order to avoid counterfeit and manage the regional sales effectively, manufacturers identify their own products with high-tech anti-counterfeiting.

Although inkjet marking machines are now in common use, some problems are continuously emerging:

- Traditional printing equipment consume large amounts of inks, which causes high costs;
- Professionals are required because of the nozzle blockage by inks;
- Indigent product styles and easy-to-erase markers will affect product credibility;
- With the enhancement of environmental consciousness, people have higher demands on safety and pollution;

According to further investigations, we find that these issues are mainly due to the current outdated inkjet marking machines. With unique anti-counterfeiting, the laser marking machine has become popular gradually.

- **Our Solution**

As the leader of laser industry, HGLASER aims to promote the application of laser marking machine in industries and provide the full range of solutions.

The latest laser solution of HGLASER can help the enterprise respond to the market rapidly. With a new marking method, the solution highlights the characteristics of the products and the differences of the brands, enhances the competitiveness of the products, shortens the upgrade period of products and provides powerful tools for flexible production.

In daily-use necessities, foodstuffs and pharmaceuticals packing, the main processing machines are inkjet marking machine and laser marking machine. By analyzing the production enterprise operating costs and typical examples, and comparing these two methods, customers will realize the development tendency.



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Inkjet Marking Machine

Principle: The nozzle is composed of several high precision valves. Depends on the internal constant pressure, the inks spray on the moving surface and form the characters or graphics.

Nowadays, human awareness of environmental protection and resource utilization has reached an unprecedented height. There is a general agreement that trying to eliminate the backward machines, which caused serious environmental pollution and wasted a lot of resources, has become a global consensus.

As an old machine, inkjet marking machine has problems in pollution, consumption, breakdown and maintenance cost. Especially the chemical pollution will cause harm to environment and operators. So it is hard to keep pace with the development of the industry.

- The ink and solvent are volatile, will produce much chemical poisonous residue harmful to environment;
- The inkjet marking machine consumes a large amount of inks, which causing high costs;
- The machine nozzle will be blocked due to the change of environmental temperature, humidity and dust, which may cause frequent breakdown.
- The costs of changing nozzles and other accessories are too high.

Laser Marking Machine

Compared with inkjet marking, the laser marking is more advanced. The application of laser marking machine begins in recent years and develops very quickly. It greatly solves the problems of traditional inkjet marking machine, and offers much more flexibility and reliability, is suitable for all kinds of soft packaging materials.

Principle: Laser marking is local irradiation in substances with high energy laser beam to make it evaporate rapidly and color change by physical or chemical reaction. With the method of computer cartography, laser processing can make all kinds of graphics and wordings. So the laser marking is the safest food marking equipment.

Advantages of Laser Marking Machine

- Reduce production costs and materials, improve production efficiency;
- Good security effect;
- Production dates and batch numbers markings are good for product tracking;



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- With mature industrial design and stable and reliable performance, the laser marking machine can conduct 24 hours continuous working and last 20,000 hours maintenance-free time;
- Without producing any harmful chemical substances, it is a high-tech and environmentally friendly products;
- Spray a large amount of datum in a small range and mark on product materials with extremely thin beam;
- Ensure the production site clean, and reduce the late-input and noise pollution.

Equipment	Inkjet marking machine	Laser marking machine
Investment Cost	Low	High
Consumption and Maintenance	High	Little
Maintenance Frequency	High	Low
Adhesive Strength	Easy to erase	Permanent marking
Loss and Pollution Prevention	Easy pollution	Waterproof, anti-fouling,
		has color change
Production Flexibility	Waterproof, anti-fouling,	Variety, personalized
	no color change	

Based on follow-up survey of daily-use necessities, foodstuffs and pharmaceuticals packing, and combined cutting characteristics of packaging industry with laser characteristics, HGLASER provides a full range of solutions. We help businesses to adapt the change of market, increase the quality and quantity in manufacturing and reduce the material cost to keep up with the rapid development of the industry in the international market. With the most advanced technology in hardware, and the most advanced system in software, we set up a standardized management system.

Applicable Laser Equipment

HUAGONG TECH Co., Ltd. (short for HGTECH) has researched laser for 25 years and maintains technology leading role in domestic. At present, there are thousands of laser marking machines on the production line.

Combined with foreign advanced technology and improvement of former generation, FLYING series laser marking machines are new products of HGLASER. Every technical index of the material reaches international level.

Compared with domestic similar products, it has obvious advantages in technology and reliability.



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FLYING series laser marking machines are made for online marking on surface of various products and external packing. In the process of marking, the products go through the production line constantly, increasing the production efficiency greatly and making laser marking suitable for industrial manufacturing. The applied range of laser marking machine covers almost the whole applied range of inkjet marking machine. FLYING series laser marking machines are widely used in the fields of bio-pharmaceutical, tobacco industry, wine industry, food industry, switch panel, health product, electron industry, national defense industry, auto accessories, card-making industry, craft gift industry, apparel accessories, building materials and so on. Furthermore, the applied range of laser marking machine is getting wider and wider.

FLYING series laser marking machines developed by HGLASER adopt stable lasers and fast speed galvanometer scanning system. There are almost no mechanical parts or wearing parts, ensuring 24 hours continuous production and more than 20000 hours maintenance-free time.

- Easy regulation for various production sites.
- Air cooling design instead of huge water cooling system. Low power consumption, no consumables.
- Need no ink or chemical solvent. The working environment can be clean and free from contamination.
- Waterproof, dustproof, antimagnetic and quakeproof. This series laser marking machines can work in bad environment.
- The marking software is intelligent and is completely self-developed, supporting various mapping software, such as PHOTOSHOP, CORELDRAW, AUTOCAD, and so on. This series laser marking machines can realize marking of Chinese characters, English characters, dates, bar codes, serial numbers, patterns, etc. Supporting programming language Visual Basic, this series laser marking machines provide technology potential to users. Furthermore, supporting WINDOWS2000, XP, NT and Win7, this series laser making machines nearly double the marking speed compared with traditional marking methods. Allowing individuation of user interface, they satisfy the demand for personalization.

• Customer Benefit

With laser technology, customers will benefit much:

- Without tool wear, the operating and material costs are reduced;
- Fast speed improves production efficiency greatly;



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- Permanent markers promote product anti-counterfeiting ability;
 - The laser marking machine is a high-tech and environmentally friendly product, won't produce any chemical substances harmful to human body and environment;
 - Without ink and chemical solvent, the working environment is clean and non-pollution;
 - Brand awareness of products will be increased by classier products and additional value;
 - With the traceability system, all aspects of the whole manufacturing process and the operating costs can be controlled effectively;
 - Good flexibility increases the diversity of products.
- **Related Application**

