

# Configuration of industrial inkjet printing machines

## Detail Introduction :

Industrial inkjet printing machines are ideal for a variety of printing applications, from labeling to packaging. Inks are very expensive, and can only be reverse engineered by HP. HP inks require high temperatures and bulk ink feeders cannot handle them. Thin paper and plastic films can warp and melt when the inks are too hot. In addition to causing damage to the media, inks also reduce efficiency.

## CIJ

The process of continuous inkjet printing is used for packaging and product marking. This technique was developed by Lord Kelvin, who patented the syphon recorder in 1867. It recorded telegraph signals on paper by deflecting an ink jet nozzle with a magnetic coil. In 1951, Siemens introduced the first commercial device using Kelvin's patent. It is now an integral part of manufacturing processes in a variety of industries. Industrial inkjet printers can be used to produce a variety of products. Many products are subject to the Federal Food, Drug, and Cosmetic Act. These products must carry an FDA monograph and be labeled as over-the-counter pharmaceuticals. A few of these products, such as sunscreens, antiperspirants, and acne creams, can also be printed on a variety of materials.

Its advantages include high-speed printing, freedom from nozzle clogging, and the use of volatile solvents for quick drying. However, it is not without its disadvantages. It is often considered dirty and environmentally unfriendly due to the large amounts of solvent-based fluids used. This is not necessarily true.

Industrial inkjet printing machines have several advantages. They are widely used for marking and coding on packages. The system uses a pump to direct fluid and small nozzles. An electrostatic field picks up and directs the droplets to the substrate.

The electrical charge then diverts the rest of the ink into a recovery system. Inkjet printing systems generally cost more than thermal inkjet systems, Piezo, and thermal inkjet printers.

## Drop-on-demand

The benefits of using Drop-on-demand industrial inkjet printers are numerous.

They can mark a variety of substrates and have variable printing resolutions. They are robust, and require minimal maintenance. In fact, their design was initially conceived for the Scandinavian timber industry. Because of their durability, drop-on-demand industrial inkjet printers are ideal for the harshest environments.

Listed below are some advantages of using printers.

High operational speed enables high-velocity coding and marking of products.

Drop-on-demand industrial inkjet printers enable manufacturers to design products in a variety of shapes and sizes. They also allow the nozzle to be positioned a significant distance away from the product. Drop-

demand printing machines offer numerous advantages, including low cost, flexibility, and fast turnaround time. They can be used to print labels, packaging, and more.

High-speed droplets are essential for accurate placement of the printed object. PE printheads should be capable of delivering droplets at speeds of four to five m/s. Higher speeds may facilitate the formation of unwanted satellites. High-speed camera monitoring capabilities are included in some advanced PE inkjet printers. You'll be able to check the accuracy of the drop placement at any time.

Industrial inkjet printing systems come in drop-on-demand and continuous-in-demand types. Systems that eject droplets continuously from the printhead, while printers eject ink drops only when needed. Drop-on-demand printers can save manufacturers money by increasing their output, allowing them to produce more products. Drop-on-demand printing machines are ideal for marking packaging and coding products.

Another advantage of printing is its ability to print on a variety of substrates. PE printing is a particularly efficient application. These machines can apply coatings and deposit precise amounts of functional materials and can produce micro or macro-structures. They also help reduce manufacturing costs and inventory, supporting implementing mass customisation and just-in-time manufacturing. The following are just some of the benefits of Drop-on-demand industrial inkjet printing machines.

Moreover, drop-on-demand industrial inkjet machines are more versatile. This technology allows for high-resolution printing, vivid blacks, and photorealistic gradients.

Leibinger

Inkjet printer series offers high-quality, high-contrast marking on dark backgrounds. Its unique hydraulic system with integrated ink agitator prevents the pigments from permanently setting. With its high-speed print capability, it is the perfect solution for high-volume, fast-paced production environments. In addition, the printer's Sealtronic technology allows it to print with high-speed and efficiency without compromising print quality.

Industrial inkjet printing machines are highly efficient and offer outstanding value for money. The continuous inkjet technology enables non-contact, on-the-fly printing. This printer delivers maximum speed and reliability, with printing capabilities of up to 6.6 m/s. It can print on various materials, including paper, metal, glass, and plastic. In addition, industrial inkjet printers have high levels of reliability and long service intervals.

Small character continuous inkjet printers by have an automatic nozzle seal that prevents ink from drying inside the print head. This eliminates time-consuming cleaning and maintenance processes. In addition, the unique Sealtronic nozzle sealing system automatically retracts the ink return line into the nozzle when the printer is turned off. The nozzle seal prevents air from entering the gutter, keeping ink particles clean.

With a 24-month parts warranty, you can rest assured that the industrial inkjet printing machine will last for years to come.

The user interface makes these printers easy to operate and maintain. The printers feature a touch-sensitive interface with an 8.4-inch color touchscreen. They also have a user-defined batchjob function, which prints a series of predefined jobs in succession. Individual jobs are triggered with separate PrintGo signals. These printers are easy to integrate into existing processes and can handle up to 1024 jobs. The JET3up is equipped with Ethernet, USB, and cascading outputs.

There are many industries that require industrial printing systems. Food and beverage production environments are dusty, while timber yards and flour mills are hygienic. In such environments, the printer must be highly durable and resistant to dust and dirt. A stainless steel housing and a pressurized print head are essential to avoid interference from dust particles. Food producers also adhere to stringent hygiene regulations and frequently need to clean equipment. For this reason, industrial inkjet printers may require IP65 protection.

### Hanyi

Hanyi is the world leader in industrial inkjet presses, pushing the limits of performance and quality. The company's PageWide Industrial division was created in 2008 and focused on developing presses specifically for the industrial inkjet market. Hanyi offers unrivaled color combination possibilities and the widest selection in the industry. It offers the versatility of a full color printing solution for high-volume print jobs. The PIJ series of HP industrial inkjet printing machines offer unmatched quality for a wide range of industrial applications. The high-resolution print heads enable perfect mark quality on smooth surfaces and can withstand heavy-duty use in a production facility. The machines are highly versatile and require minimal maintenance. The PIJ print heads can be replaced by a technician with no special training. This ensures fewer costly service calls are required and that production runs are not delayed due to print head alignment. The Scitex line of systems is built for maximum versatility. The machines can print on many substrates and coatings. The POP/POS segment of the market is the primary target for the company, responding to demand by integrating workflow control into the machines. In addition to packaging, Hanyi predicts continued growth of industrial inkjet in the various packaging market segments. It will also see greater usage in design and decoration.

Aqueous ink is often used for desktop inkjet printers. This type of ink is a mixture of water, glycol, and surfactants. This makes them difficult to control. Inks contain sulfonated polyazo black dye and nitrates. Aqueous ink is also used in thermal inkjet heads, which require water for their ink-expelling function.



Inks match the print quality of offset lithography. Digital presses are known for their versatility, speed, and wide color gamut. These machines are also built with the environment in mind. Their manufacturing is carbon neutral and reduces waste. Additionally, Hanyu have earned certification from TUV Austria.