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**Abstract:** This article provides information about the types of printers and the origin of printing machines.

**Key words:** matrix printers, inkjet printer, laser printer, print printer, printing houses, printing machines.

A printing press is a machine designed for printing books, newspapers, magazines, brochures, labels, posters and other printed products. This is the main type of printing equipment. The first printing machine was invented by the German inventor I. Guttenberg in 1441-1445. The main units of the printing machine: the printing apparatus that transfers the paint from the mold to the paper; an apparatus for applying paint to the mold, a paper transfer mechanism that transfers the paper to the printing apparatus and ejects the copies from the machine; an additional device that receives and processes printed products; vehicle control and system.

There are different types of these. A printing house that uses two or more printing methods is called a combined printing house. A printing house that mainly works in offset printing or intaglio printing methods is called a factory (eg, map factory, book factory, color printing factory, typesetting factory). Depending on the type of product it produces, B. produces newspapers, magazines, books, posters, maps, letterheads, etc. divided into types. Printing houses are also divided into large, medium and small types. Printing houses can unite and form printing production associations. Mainly there will be printing mold making, pressing, product finishing and auxiliary shops. In the mold making workshop, to the upper printing method - typesetting, syncography clichés and cast stereotypes; offset method - mold and monometallic (aluminum, zinc), bimetallic and trimetallic (copper, steel, copper, chromium); intaglio - prepares copper or chrome molds. After Uzbekistan gained independence, the Printing Houses were completely re-equipped. Text and images are typed and printed on modern computers in printing houses. In the printing process, depending on the small quantity, high-speed reel (rotation) and flat printing, single and multi-color printing machines are used. Individual lathes or large aggregates, assembly lines are also used in the finishing shop, depending on the small number of them.

Some printers use one type of transfer, while others use a combination of several transfer modes. The pneumatic system uses compressed air to adjust the pressure of the scraper of the printing machine and the pressure of the ink return blade, and the solenoid valve can control the speed and travel distance. Printers with solid pneumatic drive systems are generally less expensive than models with electromechanical or servomechanical drives.

Overview of printing machines Regarding domestic and foreign countries: printing machines are mainly divided into: digital printing machines (printers), flat screen printing machines and rotary screen printing machines. Walking table press printer: This is a high-tech digital printing equipment of the type of "non-contact" inkjet printing. The basic principle of choosing a printing machine is that "the fabric determines the technology and the technology determines the equipment".

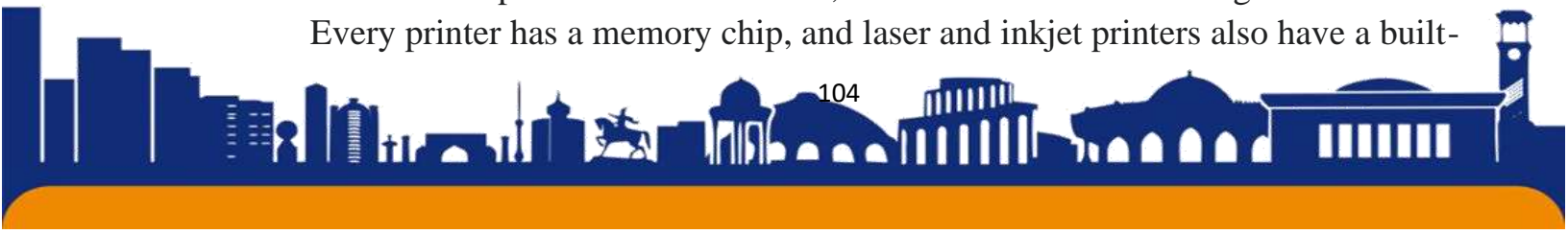
Nowadays, there are different types of printers. The basics of their printing technology, types of printers and their functionality are considered. Today, there are three main printing technologies. Because local area networks are located everywhere, printers can be provided to several users.

A printer is a printing device designed for printing (printing) information in the form of text or graphics (pictures, diagrams) on a computer. Data can be printed on paper (and sometimes film) in black and white or in color. In this respect, printers differ from each other. There are many types, but matrix, spray, and laser are the most common. In dot-matrix printers, printed data is formed from a set (combination) of dots. Because of this, their print quality is lower than that of inkjet and laser printers. In inkjet printers, information is printed on paper using special "inks", that is, by spraying drops of paint (ink). Laser printers can print in black and white or color using a special laser device. Copies printed on such a printer turn out to be of high quality.

The laser printer works as follows: an electrostatic image is created on the surface of the photosensitive drum with the help of laser light. The special colored powder in the drum is called "toner". This "toner" adheres to the images or letters on the pages. The drum rotates and passes the toner sticking to the paper sheet. After the toner is fixed on the paper, the finished image is created. This technology is used in copiers. LED printers from Okidata and Lexmark work in the same way. Only instead of a laser, they use an array of light-emitting diodes.

Dot matrix printers use a group of round needles that strike the paper through an ink ribbon. These needles are collected in a rectangular grid. We call it a matrix. When certain needles are pressed into the matrix, different characters or images are formed.

Every printer has a memory chip, and laser and inkjet printers also have a built-



in processor. A printer can also be called a specialized computer. The memory in the printer serves as a connector for data entry in the printing function; it is designed to store data during the creation of images, fonts and commands, as well as to temporarily store fonts and other information. The size of the memory of laser and inkjet printers is a reflection of its capabilities. The printer needs to create a full-page raster image (graphics and font) in memory and then print it. Before printing, each vector image and font outline is reconstructed in raster. A large amount of graphics and fonts on the pages requires a large amount of memory. In addition, memory is needed to store the printer's font and page definition language descriptors. When out of memory, the printer prints a mixture of graphics or text, splits the graphic image on two sheets of paper, uses multiple fonts, or prints no fonts at all.

In conclusion, it should be said that modern printers are produced year by year, and working with modern printers is much easier for people, and the copies printed from the printers are of high quality.

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