

printer

A printer is a device that accepts text and graphic output from a computer and transfers the information to paper, usually to standard size sheets of paper.

Printers vary in size, speed, sophistication, and cost.

In general, more expensive printers are used for higher-resolution color printing.

Types of printers

There are two types of printers:

1. Impact Printers
2. Non-impact Printers

Impact Printers

An impact printer makes contact with the paper. It usually forms the print image by pressing an inked ribbon against the paper using a hammer or pins. Following are some examples of impact printers dot-matrix printer, daisy-wheel printer, Line printers, drum printer, chain printer, band printer.

Non-impact Printers

Non-impact printers do not use a striking device to produce characters on the paper; and because these printers do not hammer against the paper they are much quieter. Following are some non-impacted printers Ink-jet printers and laser printer.

Impact vs Non-impact Printers

Impact printer / Dot-matrix Printer

1. It prints characters or images by striking print hammer or wheel against an inked ribbon.
2. Its speed is slower.
3. Its printing quality is lower.
4. It normally uses continuous paper sheet.
5. It generates noise during printing.
6. It uses inked ribbon for printing.
7. It is less expensive.
8. Dot matrix is an impact printer.

Non impact Printer / Laser Printer

1. It prints characters and images without striking the papers.
2. Its speed is faster.
3. Its printing quality is higher.
4. Its normally uses individual paper sheet.
5. It does not generate noise during printing.
6. It uses toner or cartridge for painting.
7. It is more expensive.
8. Laser printer is a non-impact printer.

Classification of Printer

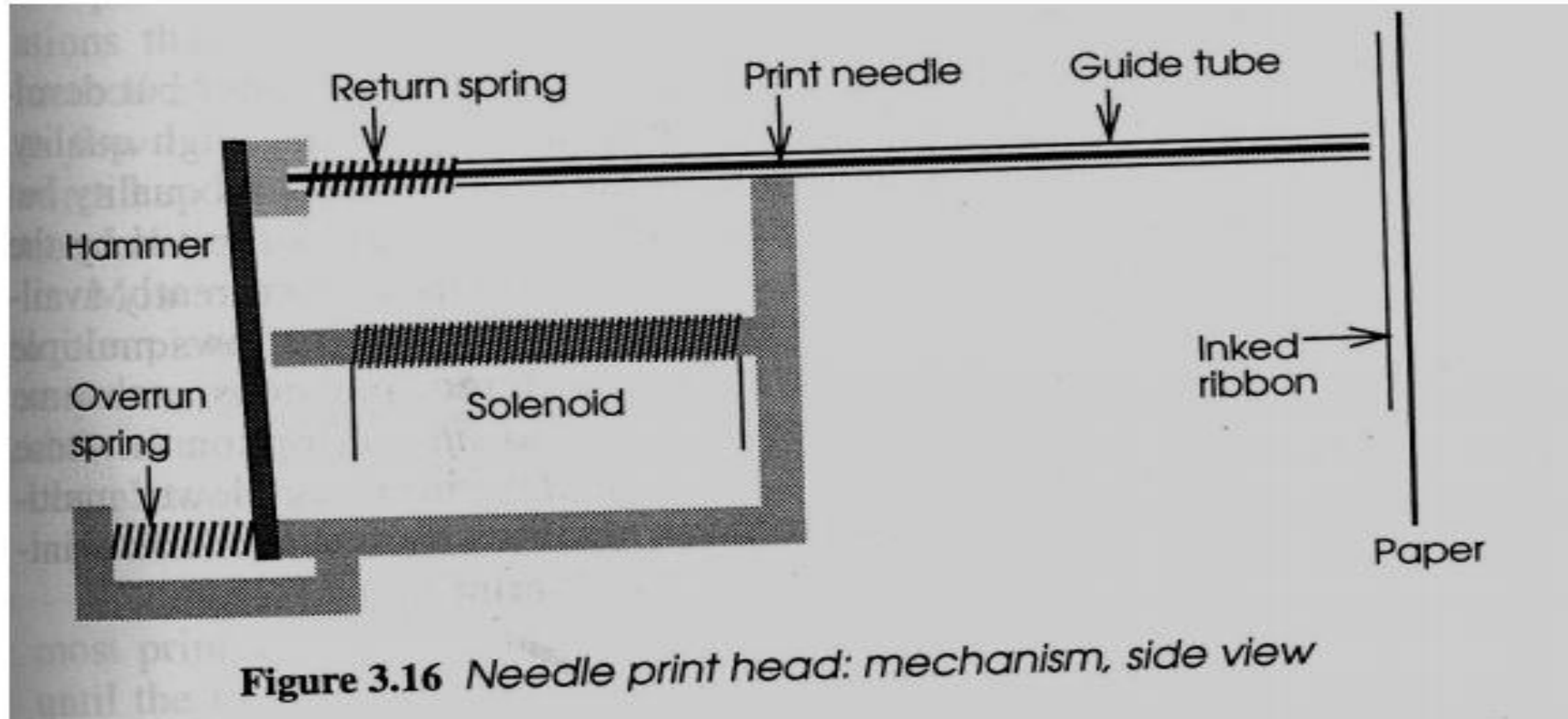
➤ Printer classification based on their technology. Typical printer types are:

1. Dot matrix printer
2. Ink-jet printer
3. Laser printer

Dot Matrix Printer

➤ A dot matrix printer or impact matrix printer refers to a type of computer printer with a print head that runs back and forth on the page and prints by impact, striking an ink-soaked cloth ribbon against the paper, much like a typewriter. Dot-matrix technology uses a series or matrix of pins to create printed dots arranged to form characters on a piece of paper. Because the printing involves mechanical pressure, these printers can create carbon copies and carbonless copies. The print head mechanism pushes each pin into the ribbon, which then strikes the paper.

Dot Matrix Printer



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► 3.9 Dot-matrix Printers

Most printers form characters and graphics using a matrix of dots but the term *dot-matrix printer* is used for impact printers using movable needles to form the dots. A number of hammers and needles in a vertical line are used to print one column of a character and then the print head is moved horizontally for the next column.

The mechanism for each needle is shown in Figure 3.16. At rest the needle is held away from the ribbon and paper by the return spring. When a dot is required a current is passed through the solenoid so that it attracts the hammer which pushes the needle into contact with the ribbon and hence marks the paper. The overrun spring absorbs any excess movement if the print head is too close to the paper or the paper is thicker than expected (multi-part forms, for example). When the current is removed the needle returns to its rest position.

Dot Matrix Printer

Advantages:

- 1.They can print on multi-part stationary or make carbon copies
2. Low printing cost
3. They can bear environmental conditions.
4. Long life

Disadvantage

1. Noise
2. Low resolution
3. Very limiter Color performance
4. Low speed