

PRINTERS



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WHAT IS PRINTER?

A printer is an **output device** that **produces text and graphics** on paper.

Many printers are primarily used as **local peripherals**, and are attached by a printer cable or, in most newer printers, a USB cable to a computer which serves as a document source.

In addition, a few modern printers can directly interface to electronic media such as memory card, or to image capture devices such as digital camera.



TYPE OF PRINTER



Printers can be divided into two main groups, **impact printer** and **non-impact printer**.

Impact printer produces text and images when tiny wire pins on print head strike the ink ribbon by physically contacting the paper.

Non-impact printer produces text and graphics on paper without actually striking the paper.

Printers can also be categorized based on the print method or print technology.

The most popular ones are:

- **inkjet printer**
- **laser printer**
- **dot-matrix printer**
- **thermal printer**

Among these, only dot-matrix printer is impact printer and the others are non-impact printers.

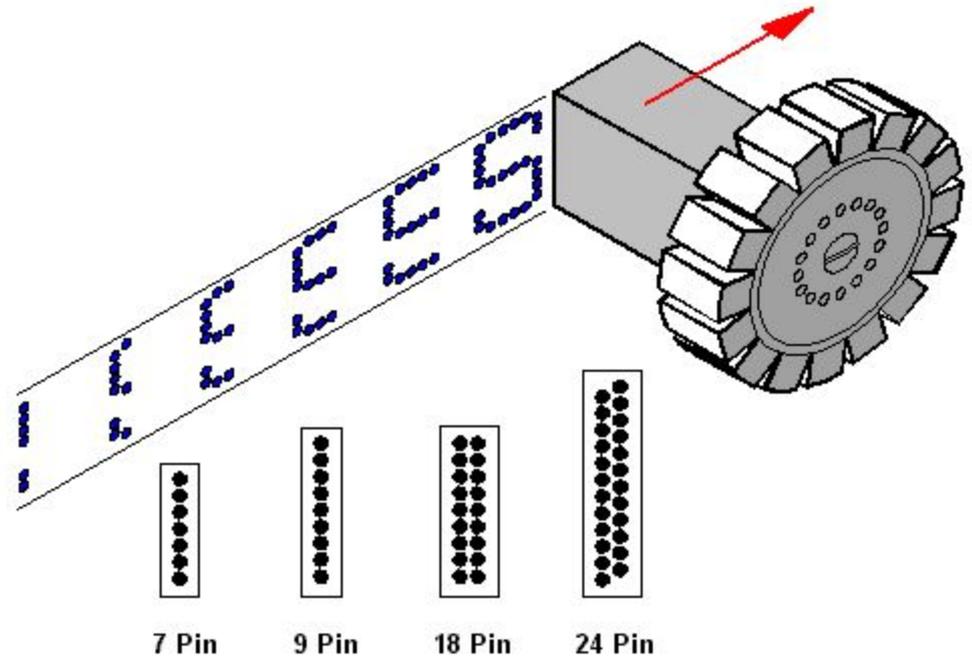


DOT MATRIX PRINTER

The term **dot matrix** printer is specifically used for impact printers that use a matrix of small pins to create precise dots

Each dot is produced by a tiny metal rod, also called a "wire" or "pin", which is driven forward by the power of a tiny electromagnet, either directly or through small levers.

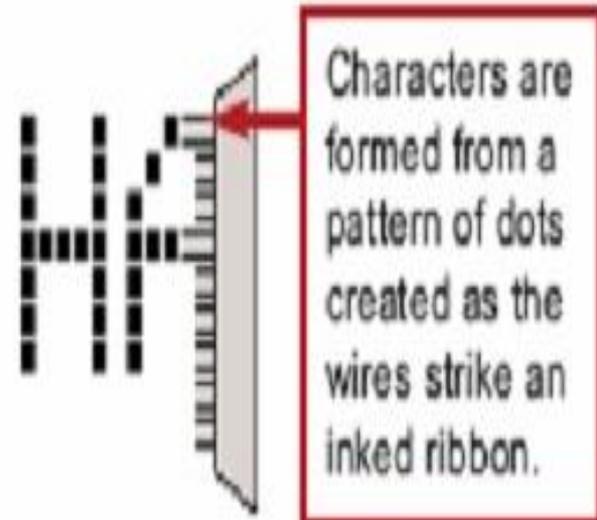
Such printers would have either 7 or 9 or 18 or 24 pins on the print head. 24-pin print heads were able to print at a higher quality.



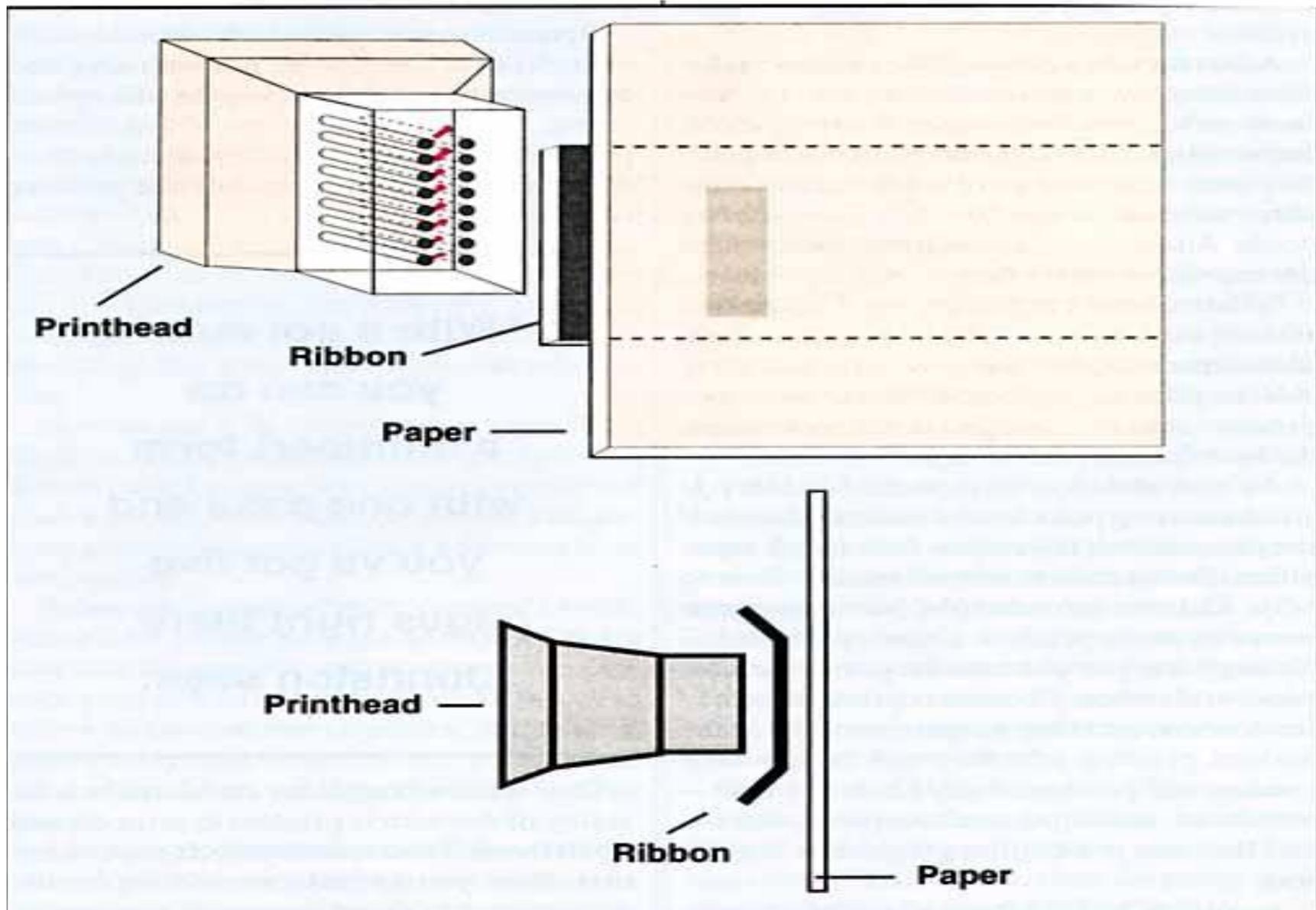


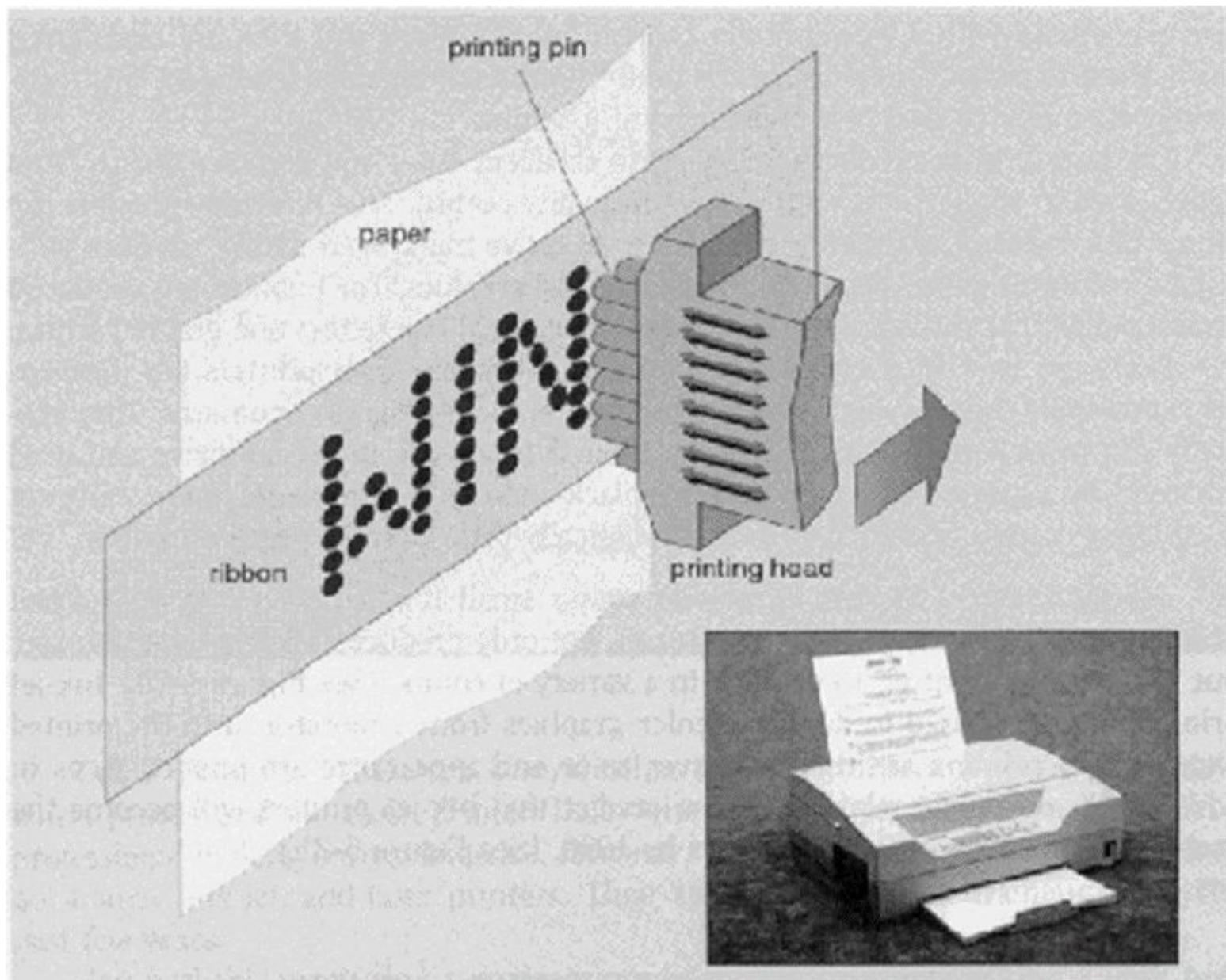
Print head contains a matrix of thin wires

Unlike laser and ink jet technologies, a dot matrix printer actually strikes the paper and, therefore, can print multipart carbon forms.



Characters are formed from a pattern of dots created as the wires strike an inked ribbon.





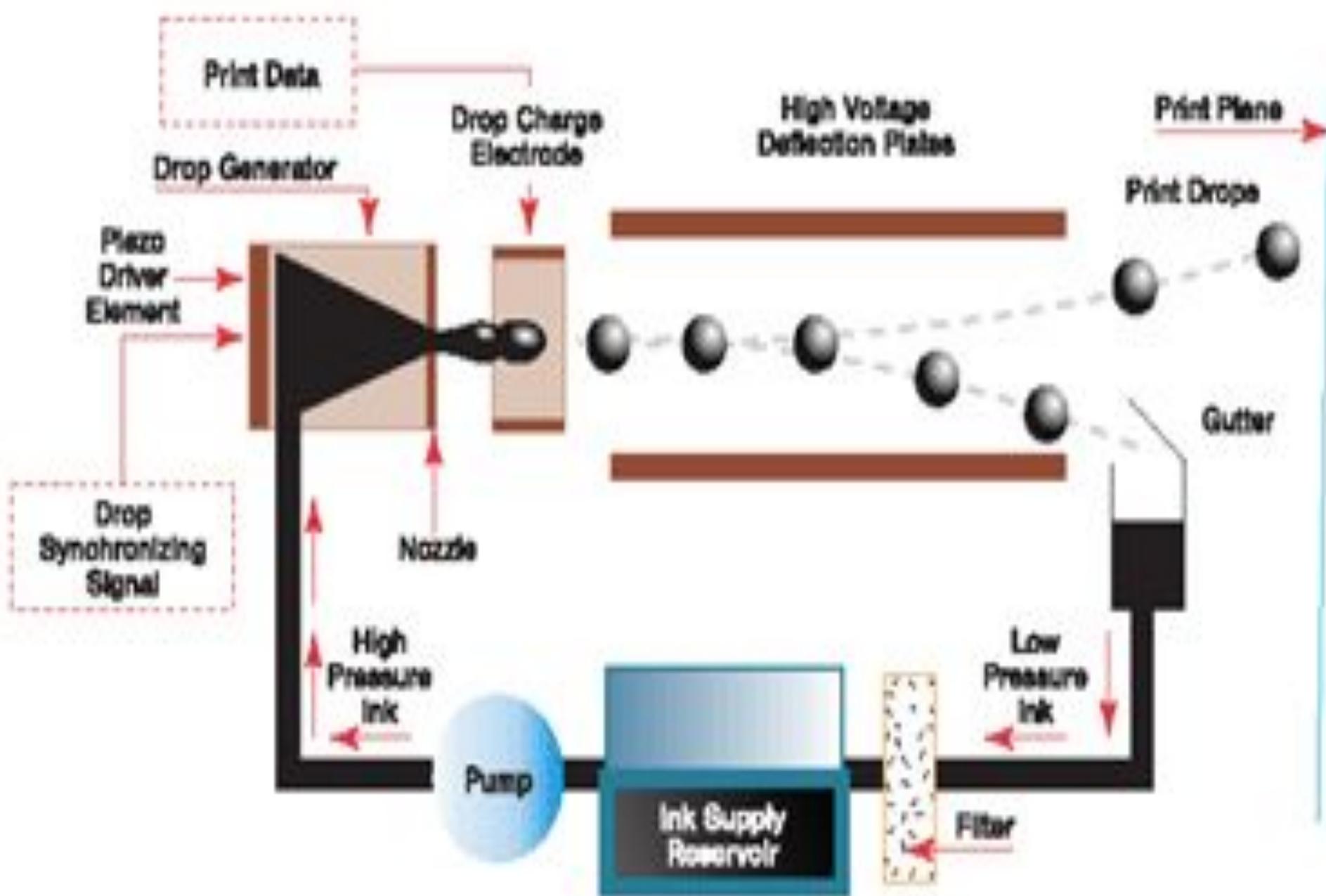
INKJET PRINTER

An **inkjet printer** is a type of computer printer that **reproduces a digital image by propelling variably-sized droplets of liquid material (ink) onto a page.**

Desktop inkjet printers, as used in offices or at home, tend to use **aqueous inks** based on a mixture of water, glycol and dyes or pigments.

A typical ink-jet printer provides a resolution of 300 dots per inch, although some newer models offer higher resolutions.





LASER PRINTER

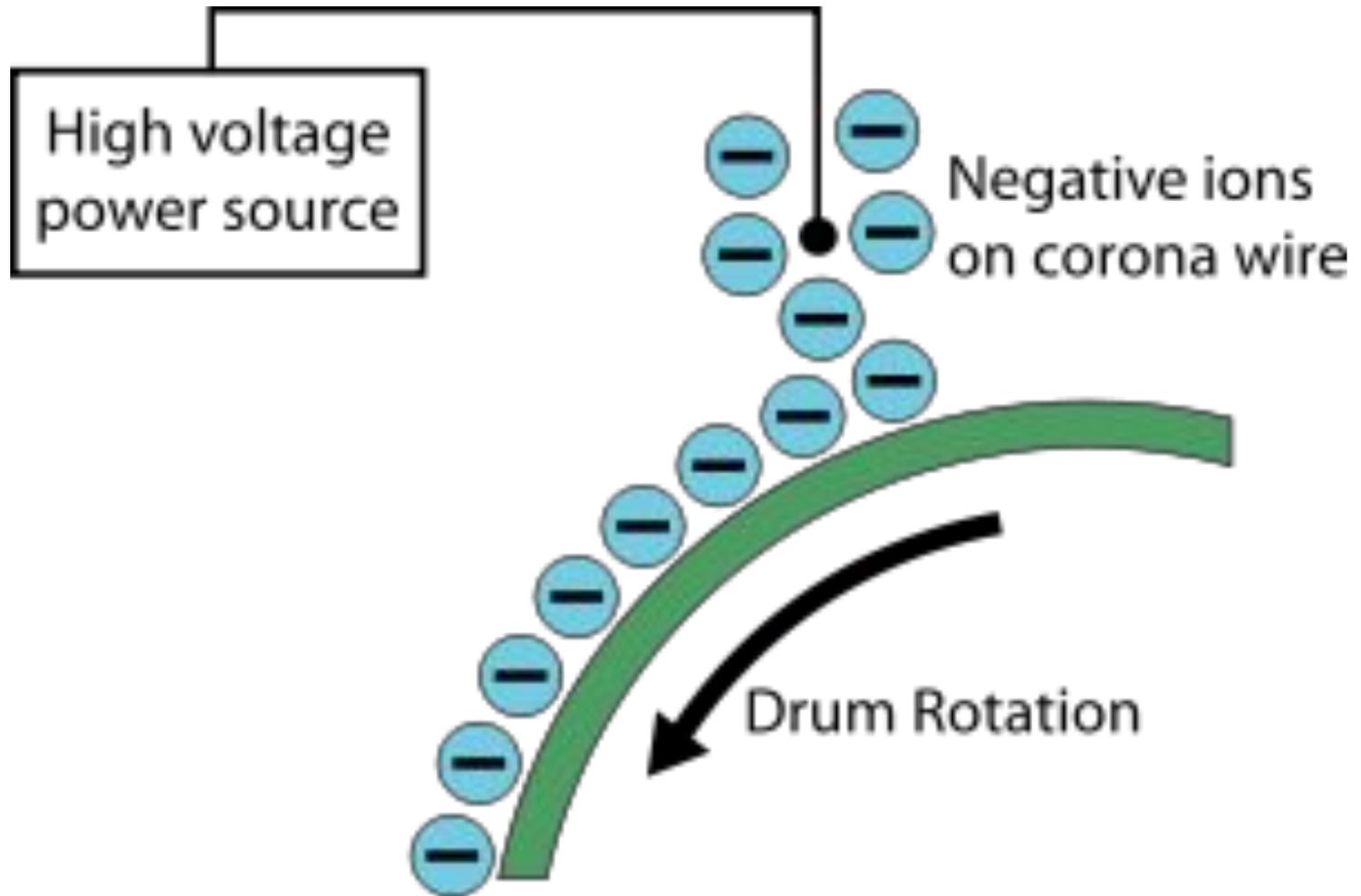
Laser printers are non-impact printers which can **print text and images in high speed and high quality resolution**, ranging from 600 to 1200 dpi.

A laser beam projects an image of the page to be printed onto an electrically charged rotating drum coated with selenium.

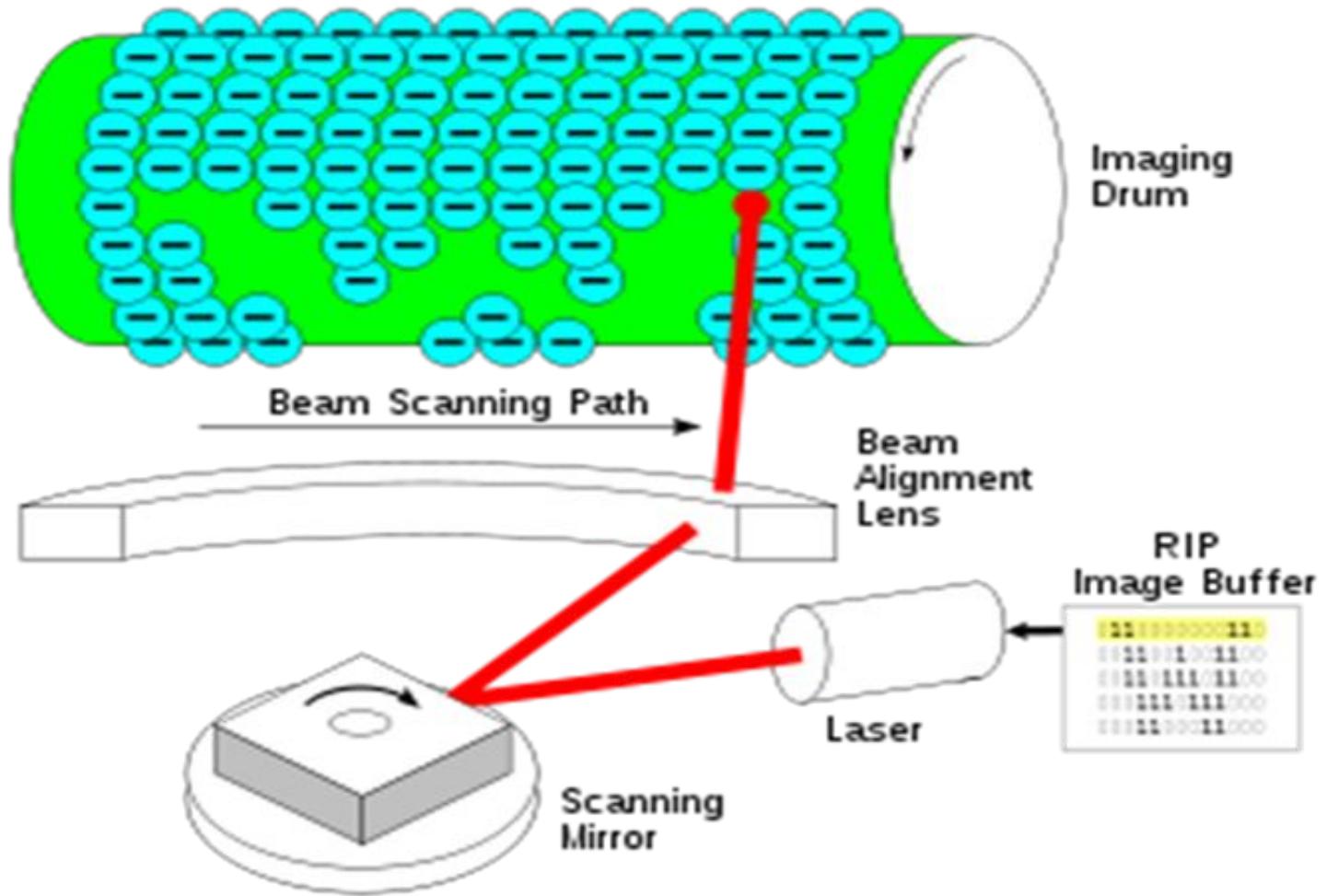
Laser printers produce very high-quality print and are capable of printing an almost unlimited variety of fonts.



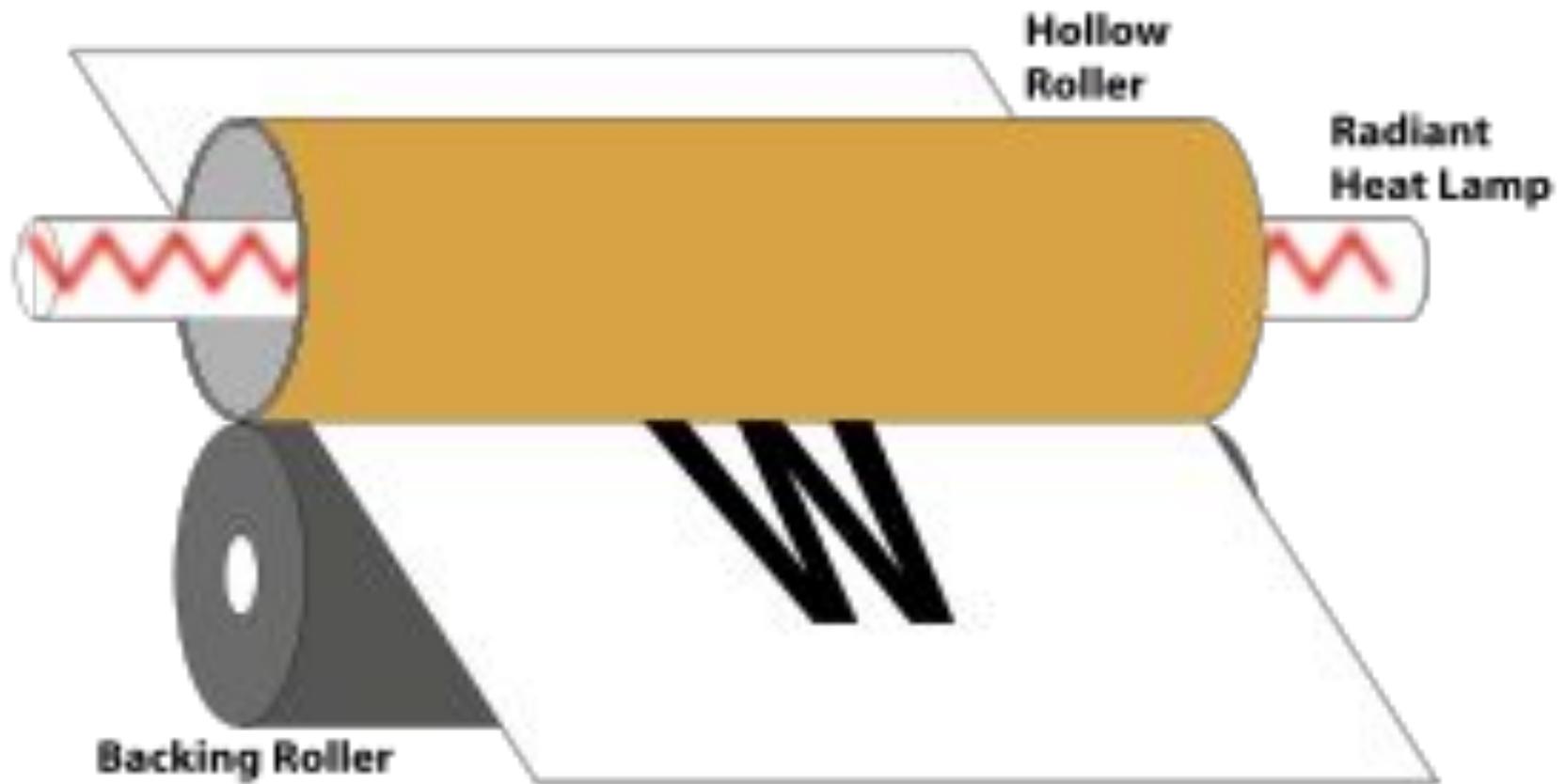
CHARGING

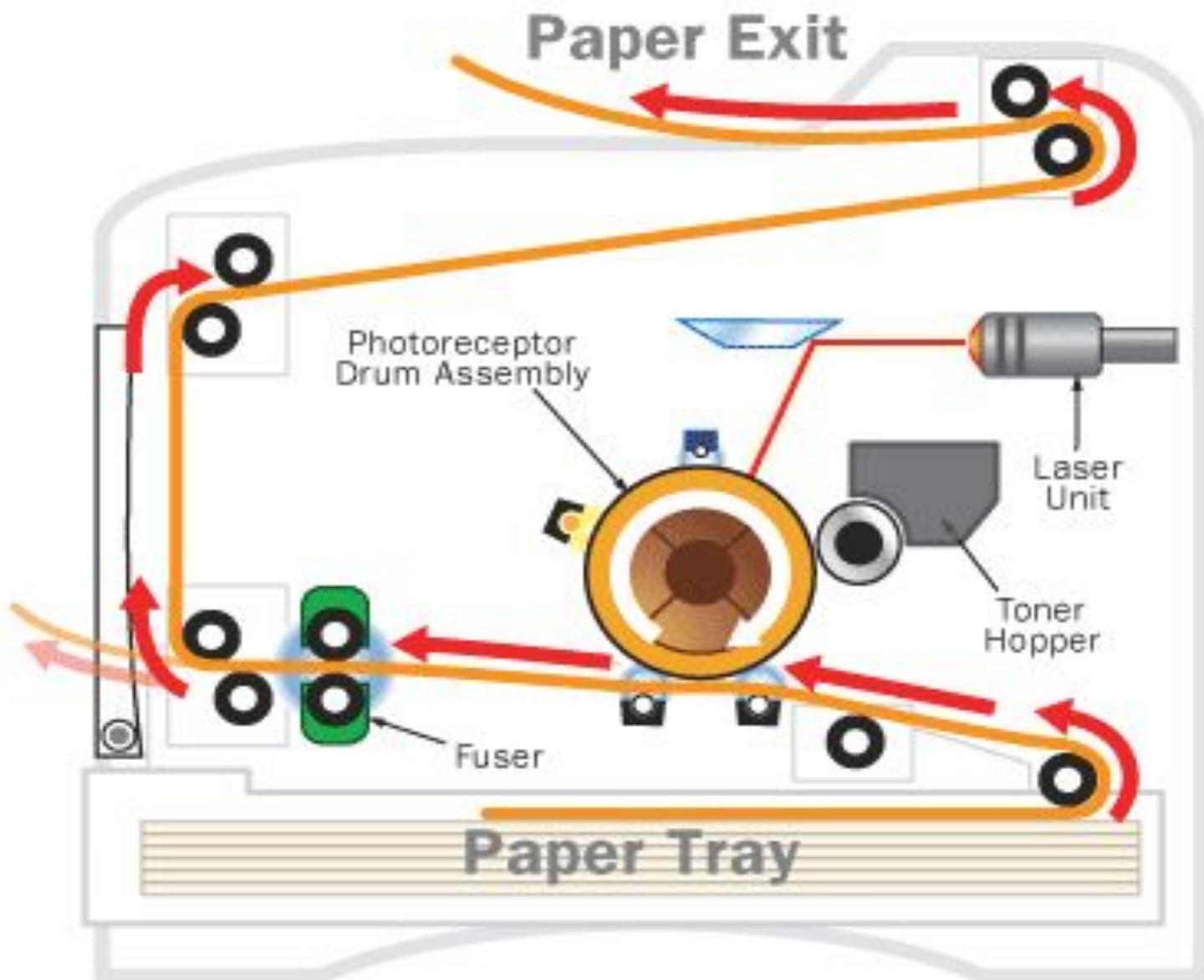


FUSING



EXPLOSING





The path of a piece of paper through a laser printer

OTHER TYPE OF PRINTER

❖ Thermal printers

The heat activates the thermo-sensitive coloring layer of the thermo-sensitive paper, which manifests a pattern of color change in response

❖ Photo printers

Are color printers that produce photo lab quality pictures on photo paper.

❖ All in one printers

It is a machine that includes several functionalities including printer, scanner, copier and fax.

❖ Color printer

Its new generation color printers which works on the principle of ink-jet printers.

❖ Dye sublimation printer

Which employs a printing process that uses heat to transfer dye onto a medium such as a plastic card, paper, or fabric

3D PRINTER and INKLESS PRINTER

