Choosing a printer

Which type of printer should I buy?

Printing is the final stage in creating a document. Since the results you can obtain with different types of printer will vary substantially, here is a guide to help you decide which one is most suitable for your needs.

To begin with, you should take into account that printers vary in cost, speed, print quality, and other factors such as noise or printing method. Technology is evolving so quickly that there is always a printer for every application or need.

Dot-matrix printers use pins to print the dots required to shape a character. They can print text and graphics; however, they produce relatively low resolution output – 72 to 180 dots per inch (dpi). They are used to print multi-part forms, self-copying paper and continuous-form labels. They are slower than laser printers (see below) but much cheaper.

Inkjet printers operate by projecting small ink droplets onto paper to form the required image. Colour and hues are created by the precise mixing of cyan, magenta, yellow and black inks. Inkjets are fairly fast, quiet, and not as expensive as laser printers. Nevertheless, you can still expect high quality results because there are some inkjet printers on the market with a resolution of 2,400 dpi.

Laser printers produce output at great speed and with a very high resolution of 1,200 - 2,400 dpi. They scan the image with a laser beam and transfer it to paper with a special ink powder called toner. They are constantly being improved. In terms of speed and image quality, laser printers are preferred by experts for various reasons; for instance, they have a wider range of scalable fonts than inkjets, can emulate different language systems, and can produce high-quality graphics; however, they are still expensive for home users.

Thermal transfer printers are used to produce colour images by transferring a wax-based ink onto the paper. They are popular for printing bar codes, labels and medium-resolution graphics.

Imagesetters produce very high-resolution output (up to 3,540 dpi) on paper or on the actual film for making the printing plates. In addition, they are extremely fast. Imagesetters are most often used in desktop publishing (DTP). Although they produce the highest quality output, they have one important disadvantage: they are too expensive for homes or small offices.

In modern lithographic printing, images are created on a DTP computer and then output directly to the printing plates, without requiring film as an intermediate step. This technology is called **computer to plate**, or **CTP**, and the machine used is called a **platesetter**.

Finally, we have **plotters**. Plotters use ink and fine pens held in a carriage to draw very detailed designs on paper. They are used for construction plans, engineering drawings and other technical illustrations. Nowadays, traditional plotters are being replaced with wide-format inkjets.

LASER PRINTERS VS. INKJET PRINTERS

When shopping for a printer, consumers may be unsure whether to buy a laser or inkjet model. Each printer type has its own advantages and drawbacks – where one kind of printer is strong, the other is often weak. Ultimately, the overall use of a printer determines whether a laser or inkjet model is best.

❧ Cost: Generally, inkjet printers are cheaper than their laser counterparts. A good, all-purpose colour inkjet can be bought for about $100, whereas even a basic black-white laser may be more expensive. Laser cartridges print far more sheets relative to their cost than inkjet cartridges. They are also less wasteful, as inkjet cartridges that aren't used often need to be cleaned, which consumes extra ink.

❧ Convenience and space: Inkjet printers can also be much smaller and lighter than lasers.

❧ Print speed: Laser printers print faster than inkjet printers. Once the laser printer is warmed up, pages are printed as fast as they can pass through the machine, with no waiting for ink to dry.

❧ Print quality: Lasers are much better at printing fine details. Some high-quality inkjets are able to approach laser-quality text output, but not only are they more expensive, they must use more ink and take more time to produce those results.