

What is difference between **offset** and **digital** printing?

TIPS &
TRICKS

Printing technology today is varied and technologically advanced. The technologies fall into two camps—offset and digital. The printed outcomes are very similar but how they got there are quite different.

OFFSET PRINTING

Offset printing utilizes concepts that date back to the age of Gutenberg. While over 500 years old, these concepts have come a long way on the evolutionary scale since that time.

Offset printing is based on the concept ink transfer from a printing plate to paper. It utilizes an aluminum plate wrapped to a drum that receives ink. The images of text and photographs are etched to the plates using a film and UV light process. The plates are then mounted to the press and ink is added. The ink is transferred to a “blanket” and then to the paper all within the press. The time between the paper entering the press and exiting can be as little as seconds depending on the press speed.

Offset printing is typically higher quality than digital, although that gap is closing with innovation. Offset is suited to large runs of 500 or more where colour fidelity and paper selection is a key issue. It is a more involved process than digital printing in that ink drying times and press setup needs to be built into production schedules.

Direct to plate printing is a fairly new technology that eliminates the use of film in printing. By eliminating the film stage used to make a metal printing plate, the printing plate is produced directly from a computer, eliminating the need for film while saving time.

DIGITAL PRINTING

Digital printing works directly from electronic data without the need for conventional printing processes. It uses the dry-ink technology such as toners and makes the process of moving from artwork to final print very quick as it

bypasses traditional plate and ink technology. It will deliver bold, eye-catching images with little need for machine setup from job to job. It is ideally suited to short and medium sized runs of full colour marketing tools below 500 units, however, recent innovations are pushing the envelope.

Past limitations of digital printing have included color, paper choices, and quality, but the technology is changing and expanding so rapidly that those limitations are disappearing. In addition, many of the present-day digital printers can also print digital images and digital photographs of extremely high quality and quantity. In particular, the direct mail industry is capitalizing on the technology to produce high quality personalized mail to vast mailing lists.