

A comparative analysis of digital and offset printing



The advent of the traditional printing was a great reform in the business community. Although a need was always felt for a printing device which can eke the printing process of short-run four-color jobs. Before the era of the digital printing wave in shape of Indigo, Docucolor and Heidelberg, the task was a dream for every business organization as the printing with four colors at small scale was very costly and inefficient to print. With the invention of digital printing technologies the printing was revolutionized and new standards of improved printing quality in a cost-effective manner was settled.

The digital transformation wave included valuable products such as Heidelberg Quickmaster DI. The invention of the digital press includes cost effective and production efficient products such as HP Indigo and The Xerox iGen 3, which fulfilled the long lasting needs of the businesses.

Offset Printing:

With the advent of the digital printing although the printing process is revolutionized but this has not effected the importance of the traditional offset printing. It is a speculation that the traditional offset printing will become obsolete in future but still it will take years. The importance of the traditional printing depends upon the nature of job as some printing jobs are over sized and cannot be undertaken through using a traditional press.

The choice of the technology depends upon the nature and specification of the job. In order to choose the most effective and relevant technology, it is important for the management to choose right and cost effective printing solution for the business with the consultation of specialized printing consultants. (Digital Synergy, 2007)

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Comparison between Digital Printing and Offset Printing:

With the introduction of advance array of printing devices the confusion has also increased. In order to make a choice between the digital and offset technology it is important to understand the characteristics and performance of both the technologies. The printing device with more suitable options related features should be chosen in order to find the most appropriate commercial printing device.

Method of printing in Offset Printing:

“ Offset lithography is the most common high volume commercial printing technology. In offset printing, the desired print image is burned onto a plate and is then transferred (or offset) from the plate to a rubber blanket, and then to the printing surface. The lithographic process is based on the repulsion of oil and water. The image to be printed gets ink from ink rollers, while the non-printing area attracts a film of water, keeping the non-printing areas ink-free.

Mechanical Steps Eliminated in Digital Printing

Digital printing eliminates many of the mechanical steps required for conventional printing, including making films and color proofs, manually stripping the pieces together and making plates.” (Pinsonnault Creative, 2007).

Advantages of Digital Printing:

The advantages of the Digital Printing technology includes Shorter turnaround. Same result in case of highest and lowest no. of prints. Through digital printing the accurate numbers of prints can be produced with a least

amount of wastage and least variation as compare to the Offset printing techniques.

Low costs for high volume printing , although the cost per unit is much more than that of the offset printing Cheaper low volume printing. While the unit cost of each piece may be higher than with offset printing, when setup costs are included digital printing provides lower per unit costs for very small print runs.

Variable Data Printing is a form of customizable digital printing. Using information from a database or external file, text and graphics can be changed on each piece without stopping or slowing down the press. For example, personalized letters can be printed with a different name and address on each letter. Variable data printing is used primarily for direct marketing, customer relationship development and advertising.

Advantages of Offset Printing:

High image quality. Works on a wide range of printing surfaces including paper, wood, cloth, metal, leather, rough paper and plastic. The unit cost goes down as the quantity goes up. Quality and cost-effectiveness in high volume jobs. While today's digital presses are close to the cost/benefit ratio of offset for high quality work, they are not yet able to compete with the volume an offset press can produce. Many modern offset presses use computer-to-plate systems as opposed to the older computer-to-film workflow, further increasing quality (Pinsonnault Creative, 2007).

The one, true choice for offset digital quality:

The HP indigo is specially designed in order to meet the quality and color processes demand of offset printing. The easy and instant to dry quality of the ElectroInk used in Hp indigo provides it with cutting edge as compare to other technologies. It is best suited for commercial printing, as it is relatively cost savvy and efficient in production. The quality of printing is very eye catching and impressive and can be used to attract the customers with a demand of high quality vibrant images.

The technology has raised the standard of the print quality, as the advanced pressing power of HP indigo is much more superior as compare to other competing technologies. The ElectroInk ekes the technology with the production of image with higher resolution, sharp images and vibrant colors. The machine provides the users with the choice of optional 5 and 6-colour inking stations with the luxury of white ink and special invisible inks best suited for the corporate printing. The Hp Indigo provides an extended array of colors as compare to other digital print technologies.

Criticism:

“ Early incarnations of the press were prone to suffer from banding and ink adhesion problems, however with newer models these issues have been resolved and would only be seen in unusual circumstances, for example if the operator had the press incorrectly configured.

Although, there is still a natural band about 100mm from the trailing edge which can only be seen when printing some colors. To help reduce the band you should adjust the 2nd transfer gap and make sure the press is well greased and lubricated.” (Wikipedia, 2007)