

What is offset printing?

Contributed by Administrator
Saturday, 17 November 2007
Last Updated Thursday, 14 February 2008

What is offset printing?

What is offset printing? Offset printing, also referred to as offset lithography, is a type of printing process used by virtually all large commercial printers. It is called offset, because the ink is not directly pressed onto the paper, but is distributed from a metal plate to a rubber mat where it is then set onto the paper.

What is offset printing? Offset printing, also referred to as offset lithography, is a type of printing process used by virtually all large commercial printers. It is called offset, because the ink is not directly pressed onto the paper, but is distributed from a metal plate to a rubber mat where it is then set onto the paper. Offset printing can be done on a web printing press, one that use huge rolls of continuously fed paper, or a sheet fed press that, as you would expect, uses sheets of paper. Both types of presses produce printed materials that can be cut to size after printing. Offset printing uses all of the latest technology in printing, including computers that aid in design. Computers are also used to generate instructions for the mixture of ink colors as well as their distribution to the paper. Offset printing works because water and the inks used in the printing process do not mix. The images to be printed are created on the computer and then "burned" onto metal plates using a chemical developing process similar to photography. The metal plates are dampened with water which adheres to the areas without images. The ink is added next, one color at a time, where it sticks to the areas with images. The most modern systems use a direct-to-plate system in which the images are burned directly to the metal plates; the omission of a secondary step saves time and money. The colors used in offset printing are usually Cyan, Magenta, Yellow and Black, represented with the letter K (CMYK). Note that K is used to represent black to ensure that there isn't any confusion with blue. Different percentages of each of these four colors create virtually every color used in offset printing. There are color matching systems, such as the PANTONE® system, that allows print buyers to see the color. The code for that color can be entered into the offset printer's computer and it will calculate the percentages of each color to be used. The technology behind offset printing allows large volumes of printing to be completed quickly and without any variations in ink distribution. The final printed materials produced through offset lithography also dry quickly, keeping the production process moving smoothly from the printing to the finish work of cutting and binding materials.