Large Format Technical Information

Types of Print Systems

Offset Printing- extra large presses are available to produce posters up to 55”x77” where volumes justify. These presses can create prints on rigid carton stocks for POP applications in addition to basic poster printing. High set up costs, limited stock availability and long lead times make this method suitable for mass production only.

Screen printing- Still used extensively for printing on plastic based substrates in larger volumes. Screen inks are very durable for outdoor applications. Spot colours can be exactly matched as well as basic process colour printing. Set up costs and times are higher than offset printing and full colour image quality is lower than offset and digital processes. No mounting or lamination is required for this process so post print finishing costs are very low.

UV Digital Printing: The latest technological development in large format printing allows inks to be dried instantly using UV lamps. This has allowed for printing directly to many rigid substrates such as styrene, foamcore and Plexiglas. These presses are also used to print onto architectural products such as glass, ceiling tiles etc. Many UV printers incorporate white ink that allows printing on clear substrates with proper full colour graphics. UV inks are not always well suited to flexible surfaces or overly smooth surfaces. The printers are not commonly used for basic poster printing.

Solvent Inkjet Printers: These versatile printers can print to a great variety of flexible substrates such as vinyls, decals and backlit films. Once solvent inks cure they are very durable and they remain as flexible as the surface that they are printed on. Inks are water proof and UV resistant and can often last 5 years or more without protection. These types of printers cannot print onto rigid materials so mounting and laminations are often required.

Aqueous Inkjet Printers: The original large format printers introduced are inexpensive to purchase, but are more expensive to operate. Their slower speeds and higher operating costs make these systems competitive for very short runs only. Since the inks are water-based they are not water or smudge resistant so all prints need to be laminated for public use. Also, lamination is often higher cost due to the water-based inks. One area that these printers excel at is resolution quality. Many printers can produce work up to 1440 DPI where the dot patterns are barely discernable to the most critical eye. These are ideal for high quality photographic and art reproduction prints.

Photographic printers: The original large format printer is still alive and kicking! Like all current systems, photo printers have moved from analog imaging to digital imaging using lasers that image photographic paper. These systems still produce the best quality back lit films as well great quality posters and images. Formats are generally smaller than most inkjet based technologies. Costs can be very attractive on volume work. Continuous tone images are often preferred for quality exhibit type applications.

Grand format: Printers that are generally 100” or wider are classified as grand format. These are usually UV or solvent printers and are used for large billboards or single panel prints of up to 20ft wide!