



HAMMER PRINT PAD & SCREEN PRINTERS

The following information is intended to equip you with some basic knowledge that may help with the training of your staff and your dealings with your clients.

Overview

Pad printing is a decoration method suited to printing small images in fine detail onto almost any smooth surface. It has the unique ability to print onto a curved or irregular surface. It is generally not suitable for printing textiles. Some common products that are pad printed include pens, travel mugs, desk clocks, calculators, USB sticks, stress toys and key rings.

Artwork and set up

The printing process begins with the artwork approval. At Hammer Print we digitally photograph your client's product and superimpose the artwork onto the product. This image is then emailed to you to show the positioning, size and colour of the final print. Please note that the best results are achieved with artwork that is supplied as vector based EPS files. Jpegs or other picture type files often reproduce poorly or cannot be used at all. Once we receive approval, a film positive is made from the artwork. This piece of film is used to expose a steel printing plate, which etches your artwork into the surface of the plate.

The next step involves making a jig to hold the product in place whilst it is being printed. The jig is usually made from wood and putty or sometimes steel.

The printer will now mix the ink. Colours are specified as PMS (Pantone Matching System) Colours. There are over 7500 PMS colours and each of these needs to be mixed from 16 base pad printing colours. The PMS system was designed for litho printing ink onto white paper. Pad printing inks are different from the PMS inks and as such, exact colour matches are not always possible. In addition, the colour of the product will influence the colour of the print. We stock the 16 base colours in 6 different ink types, each type designed to adhere to different substrates such as polypropylene, glass, rubber, wood and a variety of metals and plastics. Occasionally it is necessary to do an ink test on the product to determine the ink that will adhere best.

Once the ink is in the machine the operator needs to 'make ready'. This involves test printing onto a product covered with tape to select the best printing pad, adjusting air flow onto the pad to achieve maximum ink transfer and making minute adjustments to ensure correct print position and minimize distortion.

Once the operator is happy with the print, it is shown to management for approval to proceed with the run. It is worth noting here that all of the above, plus washing up

the machine at the end of the run, makes up the set up. A repeat set up also involves all of the above except we already have the plate and jig. Distributors often say to us that their clients don't understand why there is a set up charge.

Printing the run

The printing process from here on in is fairly simple. The pad printing machine automatically floods the printing plate with ink which is then scraped off by a blade, leaving ink only in the etched area that was created when the plate was exposed. At a command from the operator, the machine presses the silicon printing pad onto the plate, picking up the ink from the etched area. The pad then moves over the jig and product and presses itself down onto the product, releasing the ink in the process. The operator then removes the product from the jig and places it onto a drying rack, or in some cases, a conveyor belt that runs through a tunnel dryer. The jig must then be manually reloaded for the next print.

Maximum printing sizes

The size of the image that can be pad printed varies depending on the product, the artwork and the number of colours. As a guide for single colour printing on a flat surface, use the following maximum sizes:

- Circular image: 65 mm dia;
- Square image: 55 x 55 mm;
- Rectangular image: 115 x 45 mm;
- Thin rectangular image: 165 x 35 mm.

Packing and treatment

Prior to the operator 'making ready', the product has to be unpacked and treated if required. Unpacking and repacking is often more time consuming than the actual printing.

Treatment is required for all metals, glassware and polypropylene and some plastics. It involves cleaning the print area of the product with a solvent, or running a flame over the surface to burn off oil residue.

The value of branding

When purchasing any type of product decoration, bear in mind that it is the branding that adds value to the product and it is that branding that is the motivation behind your client's purchasing decision. You as a distributor have come up with the promotional product solution to suit your customer's marketing objectives, but the product is of little marketing use without the branding, yet the branding is usually only a fraction of the overall product cost.

Value the branding (it is what your business is all about) and choose an experienced decorator who will deliver a job done well, on time.