



## 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

Screen printing is a decoration method suited to printing small or large images onto almost any surface that is reasonably smooth and that can be made flat. Apart from specialized bottle printing equipment, it cannot be used to print onto curved or irregular surfaces.

It is suitable for printing textiles, corflute and other flat sheet. Some common products that are screen printed include tote bags, conference satchels, t-shirts, cooler bags, compendiums, BBQ sets and paper bags.

### 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 mesh screen. We use a variety of different meshes that let different amounts of ink to pass through them. For example: when printing t-shirts we use a coarse mesh that will let through a lot of ink, when printing a koskin compendium we use a finer mesh that will let through less ink but provide finer detail. The screen is coated with an emulsion and with the film laid over it, placed under a very powerful ultraviolet light source. The light hardens the emulsion that is exposed to the light. The emulsion that is protected by the positive film (your artwork), remains soft and is then washed out leaving a clear area of screen that ink can be squeezed through using a squeegee.

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 up to 20 base screen printing colours. The PMS system was designed for litho printing ink onto white paper. Screen 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. Sometimes it is necessary to print a white under a colour when printing onto dark surfaces. We stock base colours in a variety of different ink types, each type designed to adhere to different substrates such as polypropylene, polyester, nylon, cotton, 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 screen is made and the ink mixed, the printer needs to 'make ready'. This can involve making a jig or board to place the product over to ensure it is in the same position for each print. Small adjustments to the printing machine are also required to achieve correct alignment and position.

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 screen at the end of the run, makes up the set up. A repeat set up also involves all of the above. 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 printer manually loads each product onto the printing machine and pulls the squeegee forcing ink through the screen onto the product. A good operator will make sure that an even amount of ink is applied each time, resulting in an even, consistent print. 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 screen printed can be as large as 900 x 600 mm.

### Packing and treatment

Prior to the operator 'making ready', the product has to be unpacked and treated if required.

Treatment is required for all metals 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.