

SCREEN PRINTING

Don't be afraid: This is not a technical article.

As a PPD, you don't need to understand the intricacies of screen printing. You do, however, need to know more than your customer does. This knowledge will give you a selling advantage and make screen print orders a lot less painful.

What Is it?

Essentially, screen printing is a process wherein a squeegee forces ink through a screen and onto a substrate (a garment). Screen printing consists of five primary components: artwork, screens, screen printing press, inks and substrate. Each component introduces variables that affect the entire process. For instance, no matter how well a printer controls the screens, inks and press, bad artwork gives you a bad imprint.

How Does it Work?

A screen printer color separates images using software such as Adobe Illustrator or Photoshop, then prints each color onto a film positive (a clear sheet similar to a transparency) using an output device, such as an image setter or laser



With spot-color printing (pictured here), decorators print each color individually. This differs from process printing, where decorators use just a few colors — cyan, magenta, yellow and black (CMYK) — to reproduce a much broader range of colors.

printer. He uses these film positives to create screens, which are made from mesh material stretched over a wood or aluminum frame. He coats the screens with light-sensitive emulsion, affixes

each film positive to a screen, exposes the screens to light and rinses them with water.

Emulsion not exposed to light — the printed areas on the film positives — washes away, leaving an open area through which ink passes onto the substrate. The screen printer puts each screen on the press, registers them so that all colors line up correctly, and loads the press with inks. He uses a squeegee to drag ink across each screen and push it through the open areas and onto the substrate. Finally, he cures the inks by sending the substrate through a dryer.

What Does the Decorator Need?

Screen printers use two graphics formats: vector and raster.

Vector. (Common file extensions: EPS, CDR, AI, DXF, HPGL, and WMF) Essentially line art, this type of artwork is created in programs such as Adobe Illustrator and CorelDraw and is used for the lion's share of spot-color logos

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JPEGs, GIFs and BMP files – all raster formats – aren't good for spot-color work and are probably too low in resolution for good four-color process work.

also called bitmap images, uses pixels or dots to create artwork. Unlike vector images, raster images can't be resized without negatively affecting the artwork's detail and clarity. Raster images are generally reserved for four-color process printing.

➔ What Else Should You Know?

As you might guess, the subject of screen printing goes far beyond the scope of this article – in fact, it has filled the pages of *IMPRESSIONS* magazine for more than 25 years – but here are a few keys to keep in mind:

- Whenever possible, avoid sending screen printers images from a Web site, faxes or decorated samples as the basis for artwork.
- Due to fabric's physical limitations,

images on printed paper always look cleaner and sharper than those printed on garments.

- The size, type, color and brand of a garment all may affect artwork preparation and price.
- Limited quantities of screen printed garments generally aren't a cost-effective option. Ask your decorator about digital transfers for small orders. **PI**

and text. Computers store vector art as a series of points on an XY axis, much like connect-the-dot drawings. Because it's mathematical, the graphic can be resized, overlapped and edited easily – all without losing resolution.

Raster. (Common file extensions include PSD, TIF, BMP, GIF, JPG and PCT) This type of artwork,

➔ For More Information

Find out what to expect from screen printers and how to improve your working relationship with decorators in "Getting What You Want," from the *IMPRESSIONS* Fall 2004 edition of *Promotional Apparel*, available [here](#).



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