

Screen Printing on Long Sleeves

Follow these simple steps to achieve this trending look in printed apparel.

By Rick Davis, Contributing Writer

Offering clients the latest in apparel styles and fabrics is key for a successful textile screen-printing company. Since new garment styles are introduced nearly every week, it's advantageous to stay abreast of them to offer your clients all available options.

This installment of the *Impressions* Tech Tips Newsletter will review the American Apparel HJ407 Long-Sleeve Hammer Tee. It is manufactured with 5.8-ounce, 100% ring-spun cotton fabric. This demonstration will involve printing on heather grey long sleeves that have a fabric content of 90% cotton/10% polyester, the latter portion of which is needed to achieve the heathered effect in the gray fabric.

For those who are leery of printing on polyester, this garment's 10% content does not pose a threat for dye migration or bleeding. Since the fabric also is composed of 5.8-ounce, ring-spun cotton, it has a smooth and tightly knit surface, which is perfect for screen printing. This allows for easy graphic reproduction of high-detail or halftone applications. The fabric's tight knit also allows the use of higher mesh counts to print thinner ink films, resulting in a softer-hand print and minimal ink consumption.

ARTWORK SETUP

As with any textile screen-printing application, engineer the art to make the printing process as production friendly as possible.

An 18-inch "AMERICAN" image will be printed down the length of the garment's left sleeve.



The HJ407 is our heaviest Jersey T-shirt yet, now available in long sleeves. Features 18-singles carded cotton, double-needle bottom hem, and shoulder to shoulder reinforcement tape.

American Apparel®

HJ407

Hammer L/S
T-Shirt



The image is aligned on the press with the end set to the bottom 2 inches of the platen. Since the sleeves on many long-sleeve garments taper toward their cuff end, it is best to register the print to the bottom of the platen. This minimizes the need to unnecessarily stretch the cuff onto the platen.

PRINTING CONSIDERATIONS

Printing a dark garment is accomplished in basically the same manner as a white T-shirt, but requires a few more steps. One difference is pretreatment application. This step gives the white ink a base to print upon. Without pretreatment, the white ink would be absorbed into the fabric and disappear.

In our black shirt example, the garment is pretreated before printing. As with most standard T-shirts, the setting on the pretreatment machine is 50%. For heavier fabrics, such as a sweat shirt, you would adjust it to 60%.

PRINTING CONSIDERATIONS

For those who are new to printing on sleeves, ensure you have the proper tools and techniques before diving in.

Platens: Regardless of which screen-printing press you own, the manufacturer likely offers a sleeve platen for this specific application. Since they are offered in different widths and lengths, it is important to do your homework to ensure the platen you choose will be versatile for different sleeve and pant-leg applications. Select a platen that can easily be loaded and unloaded. Some sleeve platens allow for multiple sleeves or garments to be loaded simultaneously to increase productivity.

Another critical aspect to consider is the potential for platen deflection. Platens — especially homemade models — can deflect at the end of the printing stroke, which can result in smearing or shadowing. Since you are printing on a narrow platen that extends outward from the press, a rigid platen would minimize this effect.

Also, since the far end of the platen is unsupported, deflection can have a negative effect on quality. So remember to ensure the platen has proper support.

Screens: As with any textile screen-printing application, minimize the ink film on the fabric to achieve the softest-possible hand. Since the tight knit of the ring-spun fabric on the HJ407 Hammer Tee offers a smooth printing surface, I will print the image in black through a 230 mesh stretched



to 30 Ncm/2.

The screen's tension is critical when manually or automatically printing long, narrow graphics. Using a low-tension screen could result in shadowing at the end of the stroke due to squeegee drag on the mesh. In this case, set the press to 1/8-inch off-contact to ensure a crisp snap-off.

INKS

The goal is to ensure the smoothest and softest print possible, especially when printing long-sleeved tees. From the standpoint of achieving the softest hand, water-based inks offer the best results because of their nature. Water-based discharge inks also will work well when printing on 100% reactive-dyed cotton. Remember that when working with water-based ink systems, it is best to use a forced-air dryer to achieve the proper cure.

For this demonstration, I am printing with black plastisol ink, which has been modified with a soft-hand additive and curable reducer. The soft-hand base contributes to the softness of the print, while the curable reducer increases the ink's flow characteristics, allowing for a thinner ink film. The result is a completely smooth print with the soft hand of water-based ink.

SETUP

Ensure the print is correctly aligned on the platen. In this case, the image is placed straight down the outside/center of the sleeve. Many facilities simply will draw a line down the center of the platen to use as a reference point. If you choose this method, use a platen peel covering as

opposed to permanently marking the platens.

In this case, I am using lasers, whose lines will be visible once the garment is loaded.

During shipping, some shirts develop a crease down the outside of the sleeve and opposite the inside sleeve hem. This allows decorators to easily and accurately load the sleeve onto the platen to ensure proper graphic placement from garment to garment. In this demonstration, I used a standard 4-inch-wide sleeve platen.

As previously mentioned, platens and their widths

may vary among manufacturers. Depending on the configuration, you may slow the loading process for wider platens to ensure proper graphic placement.

The process of printing on long-sleeve T-shirts is relatively similar to printing on the front of any garment when the proper processes, supplies and procedures are used.

STEP-BY-STEP

Printing facility and supplies courtesy of Wave Graphics, Mattoon, Ill.



STEP 1 The 10% polyester content does not pose a threat of dye migration or bleeding for those who are leery of printing on polyester for that reason. Since the fabric is made of 5.8-ounce, ring-spun cotton, you have a smooth and tightly knit printing surface.

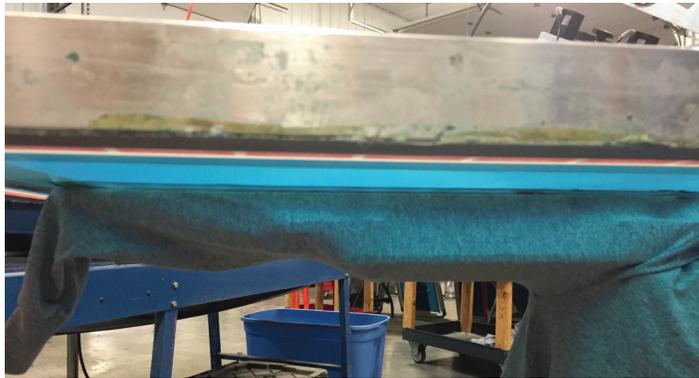


STEP 2 Tapered sleeve platens allow versatility when printing standard long-sleeve garments and newer styles that are tapered at the wrist. *Photo courtesy of Action Engineering.*



STEP 3 The M&R Triple Play sleeve platen allows multiple sleeves to be loaded and printed in one pass. *Photo courtesy of M&R.*

STEP-BY-STEP:



STEP 4 This side shot of the screen and platen shows the 1/8-inch off-contact distance desired for this application.



STEP 5 This photo shows the sleeve properly aligned on the platen as well as the laser beam.



STEP 6 Platens — and platen widths — may vary among manufacturers. Depending on your platen configuration, you may slow the loading process for wider platens to ensure proper graphic placement.