

Allover Printing with Sublimation

Capitalize on this trending apparel decoration method and watch your profit margins rise.

By Terry Combs, Contributing Writer

Allover print sublimation graphics are popular in the fashion world and among traditional apparel decorators. Printing a complete garment is considered large-format, inkjet sublimation decoration (42 inches wide and larger), as compared to desktop inkjet sublimation printing, where traditionally sized garment images would be used to decorate phone cases, coffee mugs and similar small items.

There are two methods to accomplish large-format, allover printing. One involves printing bolt fabric or cut pieces, then sew them together into a finished, fully printed garment. The second method is to apply the sublimation transfer to an already-sewn and finished garment.

In our sample print for this article, we've applied the sublimation transfer directly to a finished American Apparel shirt from its sublimation-ready line of garments.

Sublimation is a process where a CMYK-printed transfer sheet is applied to polyester fabric using heat to create the chemical reaction called sublimation — turning ink into gas molecules that bond directly and permanently with the polyester molecules under heat.

While special effects can be accomplished using cotton/polyester-blended fabrics and even light-colored polyester garments, the process will achieve best results using 100% polyester white fabric. The CMYK inks are transparent and will take on the color of the fabric being printed.



A comfortable and lightweight T-shirt featuring contrast short black sleeves, American Apparel's sublimation contrast short-sleeved T-shirt (style PL4323) has a front panel made of 100% polyester and a back panel made of 50/50 polyester/cotton jersey. Weighing 4.5 ounces, it delivers superior sublimation results.



The Sublimation Series.

American Apparel®



As an example of the proper garment for this decoration process, a test print was done on an American Apparel sublimation contrast short-sleeved T-shirt (style PL4323). It has black short sleeves and a black back, but a white polyester front panel for a potential full-front image. When finished, the complete garment takes on a fashion look.

For the test print, an Epson F6200 42-inch sublimation inkjet printer and an Insta 1020 large-format dual-platen shuttle heat press were used. The technicians at Equipment Zone, Franklin Lanes, N.J., prepared the file and printed the sample garment.

Sublimation printing is a full-color CMYK process method, so you can achieve full photographic reproduction on white polyester. Process printing allows for 16 million color variations. Since we are commonly creating photographic images, most operators prepare their artwork in Adobe Photoshop.

After the image is on the computer screen as it should appear on the garment (using the art program of choice), it is prepared to print by importing the finished graphic into the RIP software. The Wasatch SoftRIP version 7.2 used for this sample print comes with the Epson F6200 sublimation printer. In this software, the image will be mirrored (reversed) since a transfer is being produced. Once the fabric is printed, the graphic will be “right-reading” again.

The transfer paper in a large-format printer comes in a variety of widths. For this sample, a 24-inch-wide roll was used.

After printing the transfer, lay paper on the heat press bed to protect it from an ink transfer, then lay the shirt on top of the paper. Next, lay the transfer sheet face down on top of the shirt. It may be held in place with either a light spray adhesive or by using tacking transfer paper.

When printing small sublimation images, a heat press with manual operation will be completely satisfactory. For larger, all-over-printed images, having a heat press with automated functions will be the more practical choice.

For our purposes, the Insta 1020 heat press was set at 385°F with 80 pounds of pressure. The shirt and transfer were pressed for 40 seconds. Once the heat-pressing step is complete, the garment is ready to either be turned and printed on the other side, or packaged for delivery to your customer.

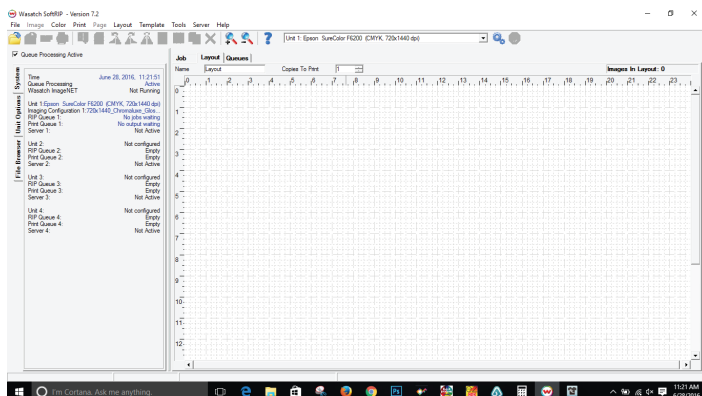
Printing a complete garment has its challenges. The most common is white spaces, sometimes called “smiles,” where



a fold or crease exists. These usually occur around sleeves and shoulders, and can be partially eliminated by flattening and prepressing the garment. However, in today's fashion world, these unique variations from garment to garment have become an acceptable part of the finished product.

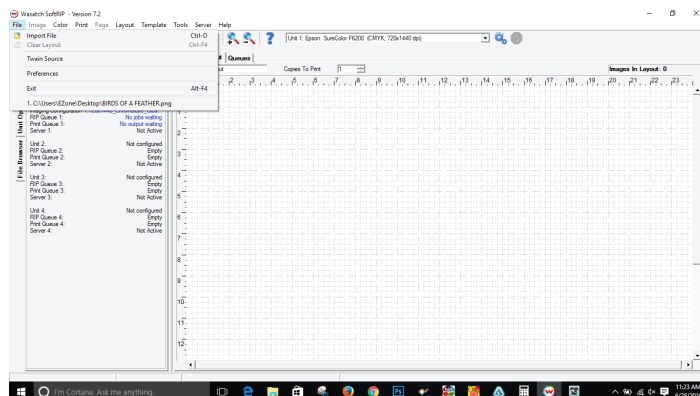
Choosing the proper garment in this niche of sublimation printing is critical. Of course, the first rule of sublimation decorating is having a white, 100% polyester garment. American Apparel's style PL4323 is a perfect example of a proper garment for this unique decorating process. As with all garment decoration and curing, testing for proper time, temperature and pressure on your equipment and in your environment is required.

STEP-BY-STEP:



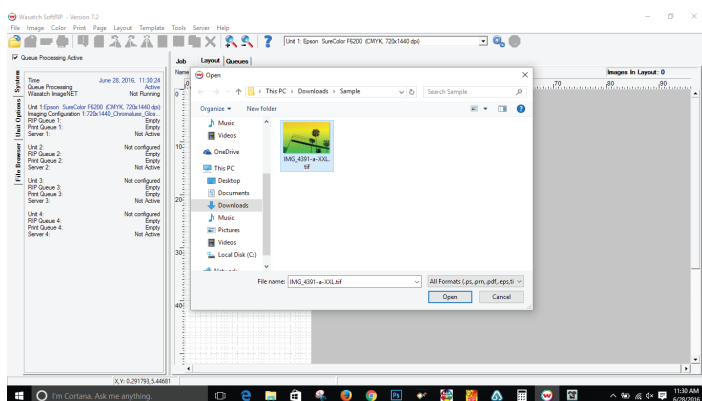
STEP
1

Wasatch SoftRIP version 7.2 was used with the Epson F6200 large-format sublimation printer in this sample print. *All photos courtesy of Equipment Zone, Franklin Lakes, N.J.*



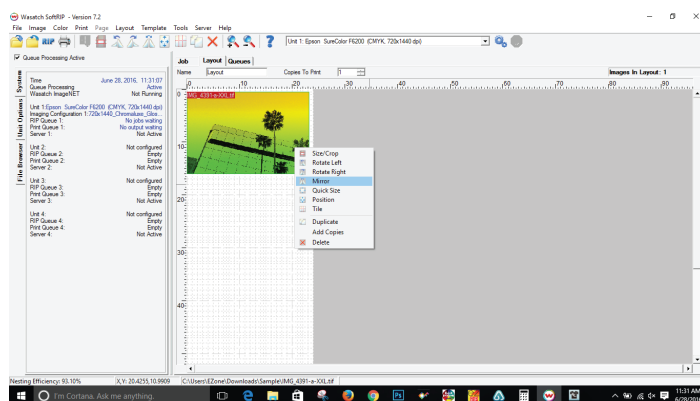
STEP
2

The print file is imported from Adobe Photoshop to the Wasatch RIP software.



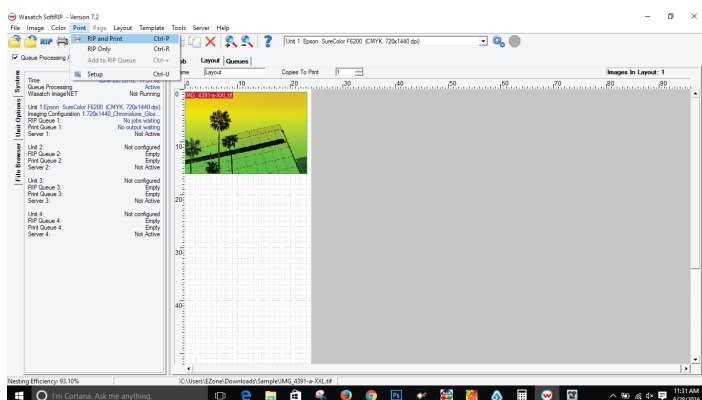
STEP
3

The file is imported and will be output on the Epson printer at 720 x 1,440 dpi.



STEP
4

The file is turned into a mirror image (reversed) since we are printing transfer paper. Once applied to the fabric, it will be “right-reading” again.



STEP
5

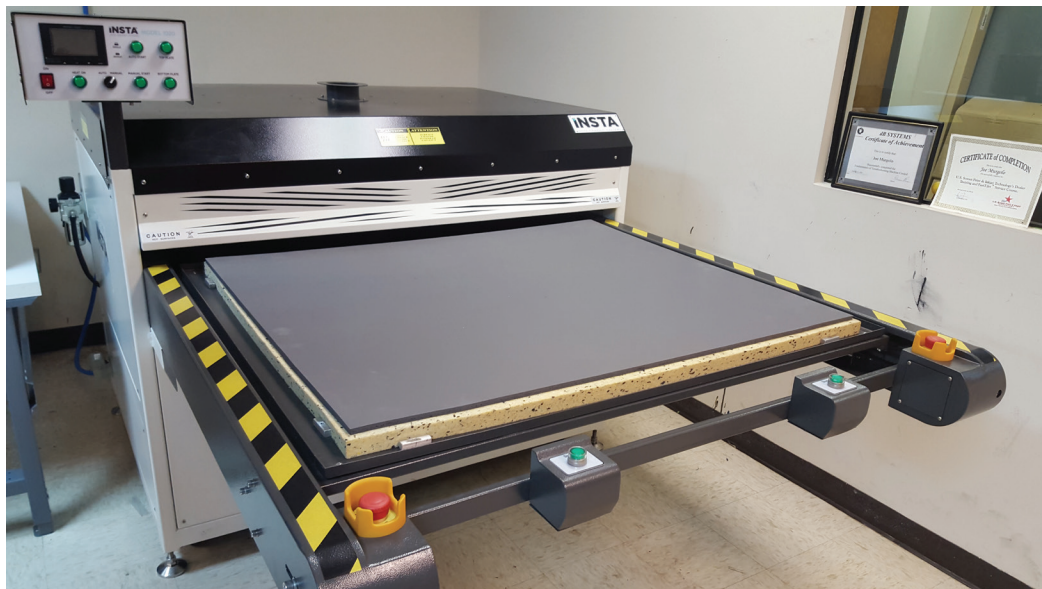
The file is now ready for the “RIP and Print” step. The Wasatch software will translate the file and then begin the print process.



STEP
6

This step involves outputting the transfer on 24-inch paper. The Epson F6200 has 42-inch-wide paper capacity.

STEP-BY-STEP:



STEP
7

The Insta 1020 large-format dual-platen shuttle heat press is used to transfer the design.



STEP
8

The shirt has been placed on the heat press bed and prepared for printing.



STEP
9

The finished sublimation transfer image on the shirt.

Terry Combs is a 35-plus year veteran of the garment printing industry, and has managed production shops large and small across the United States. He has written hundreds of management and technical articles for garment printing publications and spoken at industry events worldwide. He currently is in sales and training with Equipment Zone, working from Scottsdale, Arizona. His recent books, "Screen Printing: A Practical Guide," and "Direct-to-Garment: A Practical Guide," are available on Amazon. Keep up with Terry's classes, blog posts, speaking engagements and other resources on his website, terrycombs.com.