

DIRECT TO FILM

TECHNOLOGY BENEFITS

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Direct to film technology is increasing in popularity for textile printing. According to DTG Pro, the process works by using printing transfers that are heat pressed to a variety of fabrics, quickly creating custom T-shirts and apparel.

Direct to film modified printers that are used for the process typically come with multiple coloured ink tanks. 'These tanks allow printers the convenience to operate using CMYK settings. The direct to film printer ink is designed for use with this process,' state ColDesi.



The basic direct to film process, according to Every Tees and Splashjet Inkjet Ink:

Step 1: Print on film

Create a mirror image of the print design using a white base colour. The mirror image will be printed on a PET film, which will later be used to press the image onto the garment.

Step 2: Powdering

Hot-melt powder is applied on the film that has the printed image on it. This process is done by an automatic powder shaker that is used to apply the powder evenly and also to remove the excess powder.

Step 3: Melting the powder

After the transferred powder is applied, it is then placed in a curing oven and heated. The powder is heated until it begins to melt. The melted transfer powder acts as a strong adhesive to attach the image to the garment.

Step 4: Pre-pressing

This involves pre-pressing of the fabric prior to the transfer of the image by the film. The fabric is kept in the heat press and pressurised under heat for about 2 to 5 seconds.

Step 5: Transfer

The image and melted transfer powder are placed on the target garment and pressed uniformly using a heat press.

Step 6: Cold peel

The image print is peeled away from the transfer paper. To maintain the highest level of adhesiveness, the transfer paper must be removed when the image and garment cool to a certain temperature.

Splashjet recommends an optional post-pressing step whereby 'the final fabric with the transferred design is pressed in the heat press for around 10 to 15 seconds.'

Benefits

Variety of fabrics

One of the benefits that make direct to film popular is that it can be used for a wider variety of fabrics compared to direct to garment (DTG) printing. 'It can be used on cotton, nylon, leather, polyester, and 50/50 blends. This is unlike DTG technology, which only works on cotton fabrics. Direct to film printers work on both white and dark garments and can get the job done without requiring you to press on costly A+B paper,' state DTG Pro.

Affordability

Direct to film requires no pretreatment, which can streamline your operations and increase profit margins. 'Overall, the direct to film printing process is quicker and requires less labour than DTG printing,' state Allprintheads.

One should still invest in quality equipment to get quality results. Along with a direct to film printer, DTG Pro states that users will need: direct to film powder; direct to film sheets; compatible software; hot-melt adhesive powder; direct to film ink; a heat press; automatic powder shaker and a curing oven. There are also optional and reusable antislip pads available to keep transfer films flat and steady.

Less wastage

In general, the direct to film process is faster and more error-proof. STS Inks states that the process does not require 'cutting or weeding, creates crisp

and defined edges and images, does not require advanced technical printing knowledge and produces less waste'.

'Direct to film technology is far more reliable due to its enhanced performance and consistency of design. Plus, you will never have to worry about distorted images and unwanted white lines,' states ColDesi.

These are the pros and cons of direct to film technology, according to Splashjet:

Pros

- The fabrics exhibit good wash characteristics.
- The fabric has a very slight hand-feel touch.
- The process is faster and less tedious than DTG printing.

Cons

- The feel of the printed areas is slightly affected when compared to fabrics designed with sublimation printing.
- The colour vibrancy is slightly low compared to sublimation printing.

