

DIRECT-TO-FILM PRINTING



THE COMPLETE GUIDE TO TODAY'S TRANSFER TECHNOLOGIES

A Practical Resource for Print Professionals
Exploring Digital Transfer Solutions





ABOUT THIS EBOOK

DIRECT-TO-FILM PRINTING

This eBook was created to serve as a practical, easy-to-understand guide for print professionals navigating the fast-changing world of digital transfer technology. As the printing industry continues to evolve, methods like Direct-to-Film (DTF) and UV Direct-to-Film (UV-DTF) are redefining what's possible. These evolutions offer new levels of efficiency, flexibility, and creativity for both startups and established print providers.

Within these pages, you'll find clear explanations, comparisons, and step-by-step insights into how each process works, along with best practices, common misconceptions, and future trends shaping the industry. Whether you run a screen printing shop, sign business, or custom merchandise brand, this resource is designed to help you make confident, informed decisions about adopting modern transfer technologies and unlocking new opportunities in a growing market.

THE COMPLETE GUIDE TO TODAY'S TRANSFER TECHNOLOGIES

By understanding how DTF and UV-DTF fit into today's production workflows, readers will gain a deeper perspective on how these technologies can enhance profitability, expand service offerings, and meet growing customer demand for customization. Backed by real-world examples and expert insights, this eBook serves as both an educational tool and a roadmap for businesses ready to embrace the next evolution of digital printing.

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FROM SCREEN TO DIGITAL TRANSFER

THE EVOLUTION OF PRINTING

For decades, screen printing has been the gold standard for custom graphics and apparel. It provides durability, vibrant colors, creative freedom, and mass-production abilities. However, it also presents challenges: labor-intensive setups, limited color options, and minimum order requirements that don't suit every customer's needs.

As demand for customization increased, digital print technologies emerged to meet the need. Direct-to-Garment (DTG) led the first wave of digital disruption, enabling short-run, full-color textile printing.

But now, a new generation of Digital Transfer (DT) technology is emerging and changing the rules once again, offering increased speed, versatility, and the ability to create detailed full-color designs on demand. Among the most exciting innovations are Direct-to-Film (DTF) and UV Direct-to-Film (UV-DTF). They combine the best aspects of both: vibrant, durable prints, faster turnaround times, and the versatility to print on a wide range of materials on demand.

What makes DT unique is its ability to streamline workflows, expand into new markets, and reduce risk for print service providers. Whether you're an experienced screen printer seeking greater efficiency or a new business exploring customization options, DT offers a clear path forward.

This guide is designed to help you understand the possibilities, compare processes, and see how DT technologies apply to real-world print operations.

01



WHO BENEFITS FROM DTF AND UV-DTF?

“

**PRINT SERVICE
PROVIDERS (PSPS)**

SCREEN PRINTERS

SIGN SHOPS

**COMMERCIAL
PRINTERS**

CRAFTERS & MAKERS

**SMALL BUSINESSES &
STARTUPS**

DTF and UV-DTF are not niche tools; they're solutions for a wide range of businesses.

Whether you're creating team uniforms, branded giveaways, or high-end promotional pieces, there's a digital transfer solution that fits your business model.

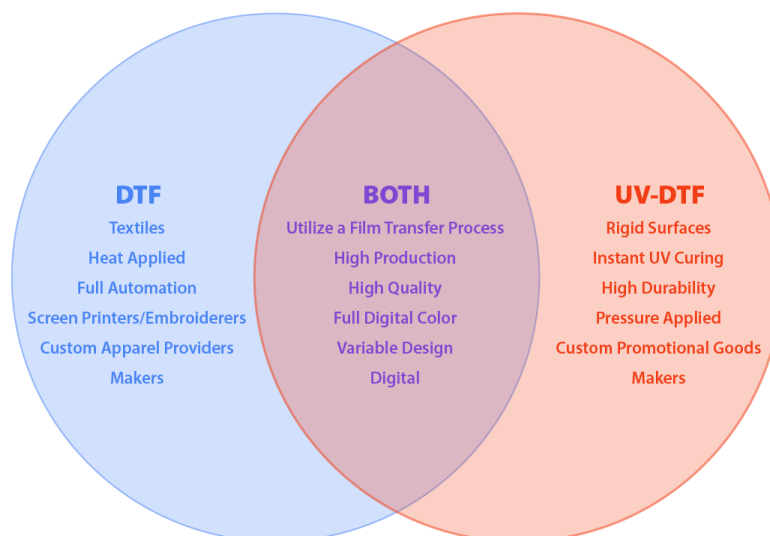
Many companies that once relied solely on screen printing have adopted digital transfers because they can quickly produce custom designs, lower labor expenses, and explore new product areas. A sportswear store might use DTF for breathable jerseys, while a boutique gift shop could utilize UV DTF for stylish branded tumblers. The possibilities are almost endless.

02

DTF VS. UV-DTF: THE DIFFERENCES

At first glance, DTF and UV-DTF might sound like similar processes. Both involve printing a design onto a film, then transferring that design to a final product. But the applications and benefits of each are different.

DTF and UV-DTF Printing Comparison





DTF PRINTING (DIRECT-TO-FILM)

Best for: Soft Goods and Textiles (Cotton, Polyester, Blends, Nylon, Leather).

Applications: T-shirts, Koozies, Jackets, Bags, Sportswear, Caps, and more.

Advantages:

Washable, durable, stretchable prints

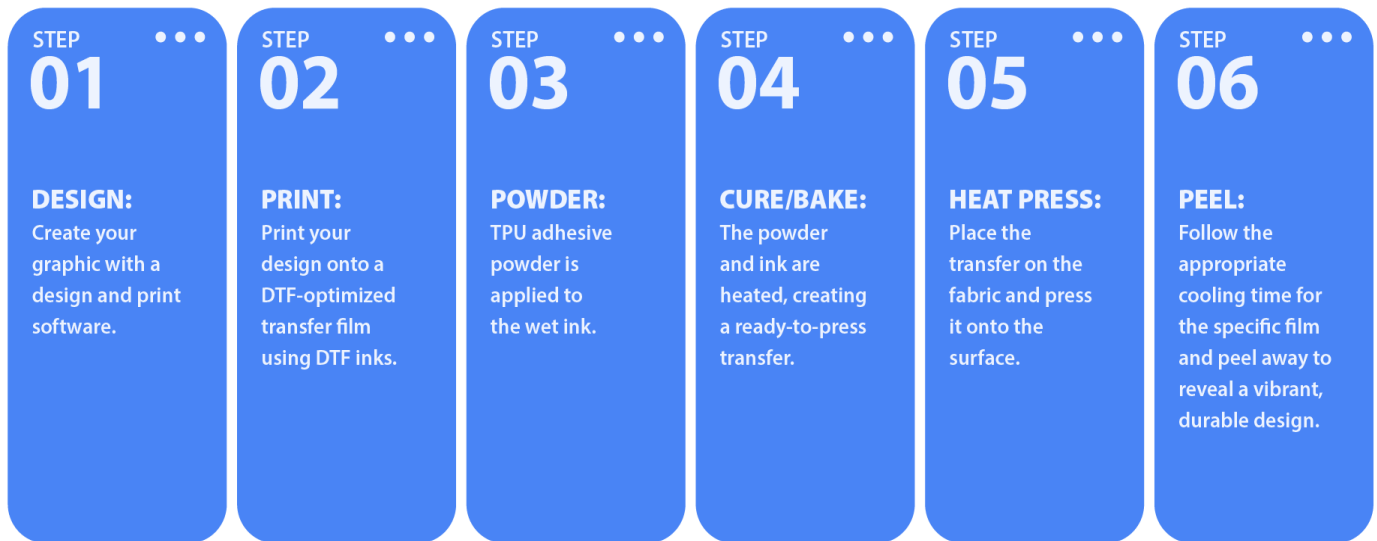
Works on light and dark fabrics.

No need for pretreatments, unlike DTG.

Cost-effective for short runs and custom jobs.

HOW THE DTF PROCESS WORKS

DTF Printing Process



04

Direct-to-Film and UV Direct-to-Film may sound complex. But once you break it down, the process is surprisingly simple, and that simplicity makes these technologies so powerful.

Think of it as a recipe- each step builds on the previous one, and the outcome is greater than the sum of its parts.

Direct-to-Film Workflow:

1. Design: Create your graphic with a design and print software.
2. Print: Print your design onto a DTF-optimized transfer film using DTF inks.
3. Apply Powder: TPU adhesive powder is applied to the wet ink.
4. Cure/Bake: The powder and ink are heated, creating a ready-to-press transfer.
5. Heat Press: Place the transfer on the fabric and press it onto the surface.
6. Peel: Follow the appropriate cooling time for the specific film and peel away to reveal a vibrant, durable design.

DESIGN

PRINT

APPLY POWDER

CURE/BAKE

HEAT PRESS

PEEL



05 UV-DTF PRINTING (ULTRAVIOLET DIRECT-TO-FILM)

Because UV-DTF doesn't require heat, it avoids issues with sensitive materials, opening the door to a broader range of products.

In short, DTF is for fabrics, and UV-DTF is for hard goods. Together, they cover nearly every surface your customers may want customized.

Best for: Rigid, Non-Porous Items (Glass, Wood, Plastic, Metal, Ceramics).

Applications: Water Bottles, Phone Cases, Signage, Promotional Packaging, Drinkware, Glassware, and More.

Advantages:

Provides vibrant, raised, textured finishes for premium effects.

Perfect for high-margin promotional products (mugs, tumblers, phone cases, signage).

No heat required- just peel, stick, and apply.

High durability on surfaces that resist traditional printing.

Quick turnaround- no need for heat pressing after transfer.

HOW THE UV-DTF PROCESS WORKS

UV-DTF Printing Process



06

UV-DTF Workflow:

1. Design: Create your graphic with a design and print software.
2. Print: Print your design with a UV-DTF printer onto A-film.
3. Laminate: Feed the printed A-film and a roll of B-film (a clear, sticky adhesive) through a laminating machine. The B-film is applied over the cured ink on the A-film. Apply backing film (B-film) onto printed A-film.
4. Cut the Design: Trim around your design, leaving a small, clean edge. This is easier than cutting precise shapes because UV-DTF transfers do not require weeding. Peel the backing. Carefully separate the clear carrier sheet (B-film) from the white backing (A-film) to expose the adhesive side of the design. Avoid touching the adhesive.
5. Position and Apply: Carefully place the transfer on your desired surface. Use a squeegee to apply firm, even pressure, working from the center outwards to smooth out any air bubbles and ensure a secure bond.
6. Remove the Carrier Sheet: Slowly and carefully peel back the clear carrier sheet at a shallow angle to reveal a high-quality and durable graphic. If any part of the design lifts, press it back down with your squeegee and re-peel.

DESIGN

PRINT

LAMINATE

CUT

POSITION/APPLY

REMOVE CARRIER SHEET

DTF VS. UV-DTF

DTF and UV-DTF are two powerful digital transfer technologies that allow you to produce vibrant, durable designs across everything from apparel to hard goods. The chart below shows how each process works and where it shines. It will help you choose the right solution for your workflow, customers, and goals.

Visual of the Differences: DTF & UV-DTF

	DTF Printing	UV-DTF Printing
Printing Media:	Fabric	Almost all object surfaces, fabric excluded.
Application:	Garment decorating industry, home decors.	Customized products including phone case, mug, bottles, etc., suitable for mass producing.
Consumable and Devices Needed:	Ink, film, adhesive powder, curing machine, heat press.	Ink, AB film, laminator.
Printing Steps:	1. Print on film. 2. Spread powder. 3. Cure powder. 4. Heat press on fabric. 5. Peel off.	1. Print on film. 2. Laminate/transfer. 3. Apply onto substrates. 4. Peel off.
Ink Needed:	DTF inks.	UV + varnish inks.

COMMON MISCONCEPTIONS

07



DTF MISCONCEPTIONS:

“DTF prints won’t last- they’ll fade or peel.”

With the right temperature, pressure, and process, DTF prints are built to last. They hold up wash after wash while keeping their color vibrant.

“DTF is too expensive to be practical.”

There is an initial equipment investment, but over time, DTF proves to be cost-efficient. Because there are no screens or plates to set up, it’s ideal for custom orders and small batches without high upfront costs.

DTF MISCONCEPTIONS: (continued)

“DTF is only for small or one-off projects.”

DTF is flexible enough to handle both. It shines with custom jobs but also scales to larger production runs, especially with techniques like gang sheets, where multiple designs are printed in a single pass.

“DTF prints feel stiff or plasticky.”

That might have been true in the early days, but today’s DTF technology produces prints that are soft, flexible, and comfortable to wear. The finish is professional, not heavy or rigid.

“DTF takes too much time and is complicated.”

Like any process, there’s a learning curve. But modern DTF systems are designed to be efficient, making it easier than ever to achieve quick turnaround times with consistent, high-quality results.

“DTF only works on certain fabrics.”

One of DTF’s biggest strengths is versatility. It adheres well to cotton, polyester, fleece, nylon, and more, opening the door to a wide variety of apparel and product opportunities.

UV-DTF MISCONCEPTIONS:

“UV-DTF transfers aren’t durable- they’ll scratch, fade, or peel.”

When applied correctly, UV-DTF transfers are impressively durable. They resist fading, peeling, and scratching, and often outlast other transfer methods like vinyl.

“UV-DTF can’t handle outdoor conditions.”

UV-DTF transfers are waterproof and weatherproof. Thanks to a UV-resistant varnish layer, they can withstand sunlight, rain, and temperature changes without losing their vibrancy.

“UV-DTF prints are fragile and scratch easily.”

The curing process creates a hard, scratch-resistant finish. This makes UV-DTF ideal for high-contact products like phone cases, tumblers, pens, and even helmets that see daily use.

“UV-DTF doesn’t last long.”

With proper care, UV-DTF transfers can last for years.

UV-DTF MISCONCEPTIONS: (continued)

“If a transfer fails, it means UV-DTF isn’t reliable.”

Most failures are due to user error, not technology. A dirty or dusty surface can weaken adhesion, or the transfer might be applied to a material that simply isn’t a good match.

“UV-DTF works on anything-even fabric.”

UV-DTF is best on smooth, hard, non-porous surfaces like glass, plastic, and metal. Because the transfers are rigid, they aren’t suited for fabrics or flexible materials that need to stretch.

“UV-DTF is dishwasher safe.”

While UV-DTF transfers are waterproof, they’re not made for dishwashers. The heat, pressure, and detergents can shorten their lifespan. Hand-washing is the best way to keep items looking their best.



BEST PRACTICES FOR SUCCESS



File Preparation: Ensure artwork is high-resolution with proper color management.

Film Handling: Keep films clean and dust-free for consistent results.

Pressing Technique: Proper temperature, pressure, and timing are critical for durable transfers.

Testing: Always test on a sample substrate before large runs.

THE FUTURE OF DIGITAL TRANSFER PRINTING

09

DTF and UV-DTF aren't just trends- they're becoming industry standards. Analysts predict explosive growth in both technologies as businesses demand faster customization and broader application options.

EMERGING TRENDS:

Advanced Automation: Automation is helping tackle production bottlenecks, making workflows faster and more efficient.

Broader Applications: Innovations like UV-DTF are opening doors to industries beyond apparel, from signage to hard goods.

Improved Sustainability: Eco-friendly materials are addressing the growing demand for greener, more responsible print solutions.

Specialty Films: DTF films with unique visual effects- metallic gold and silver, glitter, and holographic finishes- are becoming more popular, enabling creators to produce distinctive, eye-catching products.

Larger Print Formats: Newer DTF printers, such as the Epson SureColor G6070 introduced in early 2025, support wider roll-to-roll media (up to 36 inches), allowing businesses to print oversized designs and manage higher volumes more efficiently.

Enhanced Film Quality: Improved quality control in the manufacturing of DTF films ensures more consistent results, reducing errors and waste while supporting professional-grade output.

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TAKEAWAY: THE POWER OF DTF & UV-DTF

DTF and UV-DTF deliver speed, flexibility, and quality for today's print pros. From apparel to tumblers and signage, these technologies simplify production, cut costs, and open new revenue streams. Whether growing beyond screen printing or starting fresh, they provide durable, vibrant, and versatile results, making digital transfer one of the smartest, most profitable paths forward.

To learn more, contact us at **800-453-9538** or visit **LexJet.com**

Continue scrolling to view and download our free DTF resources.

RESOURCES

Helpful tools for your DTF success

In this section, you'll find a collection of practical tools and educational resources. We hope you enjoy these guides and templates designed to help you apply what you've learned and optimize your digital transfer production from start to finish.



[DTF Checklist](#)

Our free DTF Checklist to streamline your setup, avoid costly mistakes, and start printing with total confidence.

[DTF Glossary of Terms](#)

Check out our free DTF Glossary to quickly understand every term, process, and material used in direct-to-film printing.

[DTF Webinar](#)

Learn proven DTF workflows, insider tips, and expert advice for running a successful direct-to-film operation in this video from LexJet.

THANK YOU:

We hope this guide has helped you better understand the power and potential of today's digital transfer technologies. If you have questions, need personalized recommendations, or simply want to talk through the best solution for your business, our team is here to help.

Give us a call at **800-453-9538** or visit **LexJet.com** to explore more resources, products, and expert support for your printing journey.

