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CONTENTS

VOLUME 39 | August 2025 | NUMBER 4



12

SIGNAGE & PRINTING

12
Goodyear Blimp goes back to its roots with sky-high wrap
By James Anderson

17
Roll-to-roll printers provide flexibility
By Bill Schiffner

AWARDS & CUSTOMIZATION

22
Engraving slate 101
By John Morman

26
Sublimation beyond soft goods
By Jackie Faeth



32
GPX Long Beach show preview

46
GPX Meadowlands show preview



On the Cover:
Wrapping the Goodyear Blimp
(Image courtesy of Dave Soulsby)

EDITOR'S NOTE

6
Long Beach & beyond
By James Anderson



36
GPX WRAPSCON show preview

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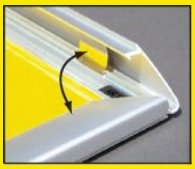
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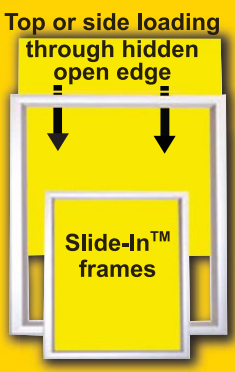
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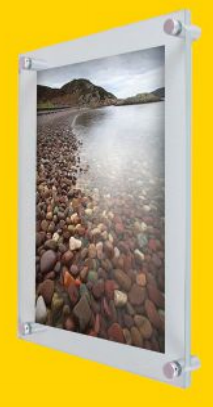




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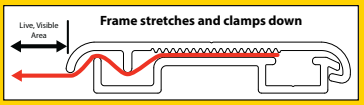
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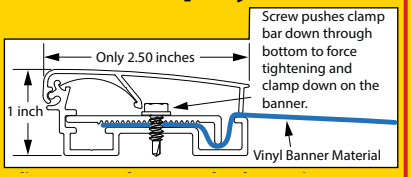






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CONTENTS



40

BUSINESS STRATEGIES

38
Staying cool under pressure
By Aaron Montgomery

42
Auto compositing in Photoshop
By Stephen Romaniello

40
From kitchen table to clothing brand
By Sid Gaffar

APPAREL DECORATION

48
A look inside direct-to-film printing
By Paula Aven Gladych

58
Curtain call: Drama club shirts
By Lon Winters

54
Your guide to fleece & outerwear
By Milissa Gibson

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EXTRAS

8
Industry updates

16B
GPX news

31
Product picks

FROM OUR PARTNERS

62
Product highlights

64
Marketplace

64
Ad index



54

6Sign

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James Anderson is the editor-in-chief of GRAPHICS PRO magazine. He can be reached at janderson@cahabamedia.com.

Long Beach & beyond

This month marks one of the highlights of my work year when I travel to GRAPHICS PRO EXPO in Long Beach. Each GPX event brings its own energy, but there's something special about the crowd at Long Beach. Maybe it's the born-and-raised Midwesterner in me, but I especially look forward to seeing attendees, exhibitors, and presenters there. If you're still on the fence about attending the show, or if you're headed to Long Beach but need more info, be sure to check out the GPX Long Beach show preview published on page 32. Included at the GPX Long Beach show is WRAPSCON, featuring the Designer Throwdown and Wrap Olympics. A detailed schedule of WRAPSCON events is on page 36.

Speaking of wraps, I had a great time talking with Dave Soulsby from Central Graphics in Akron, Ohio, about how his company recently wrapped the Goodyear Blimp to commemorate the 100th anniversary of the legendary airship's first flight. Read more about that huge project on page 12.

It's nearly mid-July as I write this, but our readers in the apparel decoration industry are always looking at least one season ahead. On page 54 of this issue, we've featured a guide to fleece and outerwear by Milissa Gibson. Turn there for a look at what you'll need in your shop for fall.

As in-depth articles go, we also feature an inside look at DTF printing by Paula Aven Gladych on page 48, and a guide to roll-to-roll printing by Bill Shiffner on page 17. Project features in this issue include slate engraving by John Morman on page 22 and a school drama department T-shirt by Lon Winters on page 58.

There is much more inside this issue, including articles on sublimation and business operations as well as updates from around the industry. If there's a topic you'd like to see covered in upcoming issues, please don't hesitate to let me know.



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NEW HIRES & PROMOS



Marci Newsom, Jeff Kranz & Mary Bostwick

Vantage Apparel

Vantage Apparel promoted **Marci Newsom** and **Jeff Kranz** to the positions of national account managers. In addition, **Mary Bostwick** has been hired as the new regional account executive for the Southeast, covering Georgia, Tennessee, Mississippi, and Alabama. Newsom has been with Vantage for 23 years and has most recently served as regional sales manager for the western region. Kranz, who has been with the company for 12 years, most recently managed the central region in the same capacity. Bostwick brings more than two decades of experience in the apparel industry, having built a career at Delta Apparel, where she held various roles in sales and marketing.



Melanie Langille

SRG

Melanie Langille is the new vice president of sales for Promobilia, a division within **SRG** dedicated to delivering factory-direct solutions. Langille brings over 20 years of experience in the promotional products industry. Prior to this appointment, she served as vice president of sales at SRG, where she led strategic initiatives across multiple business units and strengthened the company's distributor network.



Butch Skelton

Inkcups

Inkcups appointed **Butch Skelton** as the company's new southwest sales representative, where he will be responsible for supporting the growth of Inkcups in the southwestern U.S., as well as Montana and Wyoming. Skelton brings over a decade of print industry experience earned at companies such as Lexmark and Toshiba.



Daniel Tobon

DPI Laboratory

DPI Laboratory appointed **Daniel Tobon** as chief operating officer. With over two decades of global experience in technical leadership, project execution, and strategic operations, Tobon will lead DPI's product development, technical integration, and operational strategy as the company scales its offerings in UV printing innovation.

GIVING BACK

General Formulations donated a full trailer wrap to the **Mary Free Bed Wheelchair and Adaptive Sports Program**, supporting its mission to bring movement and opportunity to individuals with physical disabilities.

Charles River Apparel is an official sponsor of the 2025 **Pan-Mass Challenge** (PMC) and **PMC Unpaved**, a bike-a-thon that raises more money for the Dana-Farber Cancer Institute.

Ninja Transfers has installed solar panels that will fully power its 50,000-square-foot facility.

In a tribute to those who serve, **Infinity Her** announced a continued charitable initiative benefitting the **Wounded Warriors Family Support**, a veteran-founded nonprofit dedicated to supporting the families of America's wounded service members.

Kati Sportcap & Bag launched an Amazon wish list to support disaster recovery efforts following the devastating floods that struck the Central Texas Hill Country.

ACQUISITIONS

GroupeSTAHL, acquired **TKO Sales Inc.**, a heat transfer manufacturer based in Pompano Beach, Florida, with additional facilities on the West Coast.

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SPEAKER



Doug Charles
Account Executive in Distributor Sales
ASI

Doug Charles has over 15 years of sales experience and has been with ASI for 8 years as an account executive in Distributor Sales. His focus is on building client relationships and enhancing sales performance. Doug has been the lead representative for ASI at many GRAPHICS PRO EXPO (GPX) shows, demonstrating his expertise and commitment to the industry. He also contributes by teaching education classes at the GPX show, sharing industry insights and practical strategies to help businesses succeed. Join him in the upcoming webinar for GRAPHICS PRO, where he'll share valuable knowledge from his extensive experience.



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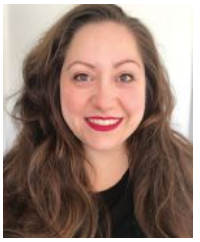
Kyle Alexander, Anna Woodford, Leah Van Dam & Nicole Blackburn

JDS Industries

JDS Industries announced the hiring of **Kyle Alexander, Anna Woodford**, and **Leah Van Dam**, as well as the promotion of **Nicole Blackburn**. With over 19 years of experience in marketing and leadership roles across diverse industries, Alexander has been added as marketing director. After several years as a contracting partner, Woodford has officially joined JDS Industries as the employee development manager within the human resources department. Van Dam has been introduced as the new financial reporting and compliance director in the accounting/collections department. Blackburn has been promoted to purchasing manager.







Mike Finley, Li Nguyen & Amanda Harris

Nazdar

Nazdar Ink Technologies added **Mike Finley** as narrow web technical application representative and **Li Nguyen** as digital ink chemist. In addition, **Amanda Harris** has joined its product management team in the role of associate product manager. Finley has experience in the ink and print industry, with a focus on print production, ink manufacturing, sales, technical service, and customer support. Nguyen has nine years of experience formulating inks for solvent-based digital printing. Harris will partner with Laura Maybaum, director of product management, to support and manage the Nazdar Screen and Coatings Graphics & Industrial products.



Martin Borley

GroupeSTAHL

GroupeSTAHL promoted **Martin Borley** to the role of chief executive officer, STAHLS' EMEA. With over 35 years of dedicated service to STAHLS' affiliated and owned companies, Borley will report directly to **Carleen Gray**, CEO of GroupeSTAHL, Inc., and will lead all initiatives across the Europe, Middle East, and Africa (EMEA) region.



Julian Bösch

Zund America

Zund America appointed **Julian Bösch** as the new managing director at Zünd's Milwaukee-based North American headquarters. He brings cross-cultural expertise and leadership experience to guide the organization through its next phase of growth. His focus will be on strengthening Zünd's market position in multiple industries, supporting customers across North America.

UPDATES

Gemline announced that **Moleskine** notebooks made with Forest Stewardship Council-certified paper are now the standard in its product offerings.

Signarama, a sign and graphics franchise, welcomed nearly 400 franchise owners and employees to Las Vegas for its 2025 international convention, SARCON.

Mimaki USA celebrated the grand opening of its new corporate office located north of Atlanta, in Flowery Branch, Georgia.

iPROMOTEu's 2025 DunkFest winners spanned distributors, suppliers, and iPROMOTEu staff.

World Emblem signed a long-term lease for a new factory located in Santiago de los Caballeros in the Dominican Republic.

For the fifth year, **Avery Dennison Graphics Solutions** sponsored the Design-a-Bus-Wrap student art contest organized by Laketran.

Koozie Group shared its fifth-annual Keep It. Give It. Social Impact and Sustainability Report.

Richard Childress Racing (RCR) driver Jesse Love's No. 2 Chevrolet Camaro featured a new **Roland**-themed wrap in the NASCAR Focused Health 250 Xfinity Series race.

Lane Seven launched a new series titled Meet The Innovator, that spotlights the innovators, the makers, and the doers who use the company's blanks to build something bigger than a brand.

SanMar Corporation shared its 2024 sustainability update, illustrating the progress made in sustainable business practices across the company.

World Emblem plans to reshore jobs to the company's new factory opening in Houston in October.

UPDATES

DTG Connection rebranded to **Printer Biz**.

Girls Who Print launched an India chapter led by GWP India Advisory Board members Nidhi Agrawal, CEO and co-founder of Design'N'Buy, and Madhura Mahajan, head of department for printing and packaging technology at PVG's College of Engineering and Technology.

UPCOMING EVENTS

Shirt Lab AI Summit
August 7-8
Chicago
shirtlabtribe.com/AiSummit/

Colorways
August 14-15
Chicago
mscprinthouse.com/colorways

GPX Long Beach
August 21-23
Long Beach, California
g-p-x.com/ca

GPX Meadowlands
September 12-13
Meadowlands, New Jersey
g-p-x.com/nj

GPX Charlotte
November 6-8
Charlotte, North Carolina
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September 11

Xante
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IT Supplies
October 16

OMTech Laser
November 4

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RETIREMENTS



Steve Smidt
SRG

Steve Smidt, vice president of sales and marketing, retired at the end of May after 14 years with **SRG** and a 26-year career in the promotional products industry. Smidt joined St Regis in 2011 during a pivotal time in the company's growth. Since then, he has played a key role in shaping SRG's sales strategy, leading business development efforts, and strengthening customer relationships across North America.

IN MEMORIAM



Beth Wolf
GSG

Graphic Solutions Group's (GSG) Beth Wolf passed away on July 1. With a career spanning nearly 50 years, Wolf was a passionate marketing leader and respected member of the sign, graphics and apparel decorating industry. Wolf joined GSG as the vice president of marketing in 2018, bringing with her a strong background in marketing leadership. Prior to this, she served as marketing director at N. Glantz & Son for eight years. Wolf was known for her innovative marketing solutions and ability to build strong partnerships with suppliers and customers alike. She was a mentor to many and a constant beacon for women in business. As a fierce proponent of team-centered success, she had a gift for cultivating people's talents.

AWARDS & RECOGNITIONS

Mike Arndt and Julie Arndt, owners of **Minuteman Press in Plant City, Florida** joined the President's Club for achieving over $1 million in gross sales for the year ending 2024.

Allegra Marketing Print Mail has been recognized by **Franchise Business Review** as one of the Top Franchises for Women in 2025.

Gildan Activewear was included on Canada's Best 50 Corporate Citizens list by **Corporate Knights** for a fourth consecutive year. In addition, the company has once again been recognized on **TIME's** World's Most Sustainable Companies list.

Minuteman Press Leechburg Owners **Danielle & Tony Colecchi** joined the President's Club for achieving over $1 million in gross sales for the year ending 2024.

PARTNERSHIPS

S&S Activewear and **HanesBrands Inc**. have announced an agreement that makes S&S Activewear the exclusive distributor of the Hanes brand in the North American printwear channel.

Imperial, a provider of golf headwear, announced a new collaboration with **The Lads**, led by major champion and former world No. 1 golfer **Jason Day**.



Images courtesy of Dave Soulsby

Goodyear Blimp goes back to its roots with sky-high wrap

How Central Graphics wrapped the Goodyear Blimp

By James Anderson

"You're going to need a longer tape measure."

That's what Joe Kist, director of sales from Central Graphics in Akron, Ohio, was told when he arrived at nearby Goodyear to measure what he thought was a wall wrap project.

Instead of a wall, the project Goodyear's team had in mind was a bit more complicated. To celebrate the 100th anniversary of the Goodyear Blimp, Central Graphics was asked to wrap the blimp in vinyl to return it to its original look when it first took flight in 1925.

The project wouldn't be Central Graphics' first ride with the blimp. In the past, the company has installed vinyl gold lettering and striping on the tailfins of two of the company's blimps. However, a job as big as wrapping a 246' long blimp in its entirety did come with a new set of challenges.

Materials

"At first it was about collecting vinyl," said Dave Soulsby, president at Central Graphics. The exterior of the blimp is a Kevlar, 13-ounce banner material. It requires tiny holes in the material to let helium release and keep the vessel afloat. "It takes flight, loses helium, then two bladders inside pump new helium into it."

Early on, Central Graphics had reached out to Ohio-based Mactac, manufacturer of pressure-sensitive adhesive material. Mactac responded with prototype samples for peel adhesion testing before settling on a final product, which they printed and delivered 30 rolls. Due to weight limitations, they avoided standard printing or using overlamination, focusing instead on a single-layer custom color adhesive film. The Central Graphics team then contracted with a

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South Carolina company to perforate the material so that it could breathe.

"After we figured out the perforated holes, it was all about the adhesive," Soulsby said.

Since the blimp was scheduled to be wrapped for the anniversary year only, it would return to its modern, painted design in 2026.

"We couldn't use a 180 or something super sticky because it would pull the paint off. We worked with Mactac. They set us up and printed at one of their facilities, where they had to come up with a specialized adhesive for easy installation and long-term removability."

The blimp's low surface energy Tedlar required a specialized adhesive for strong adhesion, with the unique gray color needing custom matching. Within three weeks, testing was done at the Goodyear hangar.

"We used a Colex finishing machine to cut all the graphics," Soulsby said. "And I think we got everything on 60" rolls from Mactac."

"Mactac ensures that we have the best product and the right product," said Jeff Loofboro, managing director at Central Graphics. "For this project, color match was important, opacity was significant to ensure the paint underneath didn't show through, and clean removability was key because the blimp is going back to its original format in one year. Mactac hit the sweet spot with a solution that wouldn't remove the paint on the blimp under the vinyl."

Design

For almost any vinyl wrap installation, an installer's design team will work with digital art files to make sure a company logo or other design element aligns with the shape of the object being wrapped. One particularly unique challenge the Central Graphics team faced with the blimp project is that there was no digital file of Goodyear's 100-year-old logo. Goodyear's logo is called the Wingfoot, and the hangar that houses the blimp was first constructed in 1917 near Wingfoot Lake, Ohio, southeast of Akron. In 1925, when the blimp first took flight, the logo was hand-painted on the blimp's material. The design team at Central Graphics was presented with just only a photograph of the original blimp on which to base their design work.

Zeppelin, the original airship manufacturer in Germany, requires approval for any modifications to the blimp. So, first, Goodyear needed to approve the custom color match. Mactac matched the color, then Central Graphics and Goodyear also approved the peel adhesion strength and ease of application. After trials and optimizations, test reports were submitted to Zeppelin, resulting in final product approval.

Central Graphics designers were then tasked with recreating the 105' long logo in Adobe Illustrator. Each letter is 10.5' tall and transferred to 25' adhesive panels.

Installation

It's a major understatement to call the Goodyear Blimp project a big job. Installation began with three crews of two people, each in scissor lifts, to get the material to blimp-level. Over the next four weeks, the six installers rarely took even a weekend day off until the project was completed.

Common installation tools were of no use to the Central Graphics crew. "We couldn't use knives, scissors, heat guns, or torches," Soulsby said. Neither tool is a good idea around a blimp. Instead, the team settled on 3M knifeless tape. For heat application, the Zeppelin company approved installation via hair dryers only, which were less likely than propane torches to burn through the material.

"We also had to put pool noodles all around the lifts to cover sharp edges," Soulsby said.

The team installed gray material over top of black and then pulled back the logo design to reveal black lettering underneath.

"These panels were 25' long, and we had to maintain a consistent overlap. Working around obstructions like wings, motors, things you're not used to," Soulsby said. "It took six installers four weeks, even though it's all rounded. We've all wrapped the VW Bugs and we've figured that out, but using 25' panels, it doesn't quite work the same."

Weight was also a concern. In all, the Central Graphics team added only 300 pounds of material to the overall weight of the blimp. Soulsby's team was told that anything over 500 pounds meant the removal of some of the seating in the blimp's gondola. "They have to be able to pull it down to maintain a certain loft," Soulsby said. "This wrap kept it cool enough that they could maintain their loft."

Client relationship

On a project this big, Soulsby said his company was lucky to have the Goodyear Blimp hangar just 20 minutes away from their shop. "It's not like every client is easy to work with, but this process was so easy. I can't wait to work with Goodyear again," he added. "You can't say that about every client."



On June 3, the Goodyear Blimp featuring the work of the Central Graphics team flew above the Akron area along with two other blimps Goodyear owns. It was the first time in years that all three blimps had flown together in the same place.

For Soulsby, the moment was somewhat bittersweet. The event occurred while he was on a previously scheduled vacation, so he missed the 100-year-old Goodyear Wingfoot logo floating across the skies over Akron. "I saw plenty with all the pictures people were sending me," he said. GP



James Anderson is editor-in-chief of GRAPHICS PRO. He can be reached at janderson@cahabamedia.com.



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GPX Long Beach to host first Women in Graphics panel

Register for GPX Long Beach:

This month in Long Beach, California, join the GRAPHICS PRO EXPO team Aug. 22 at 8 a.m. PT to hear from four industry-leading women who will share their experiences in building successful brands across engraving, sign making, automotive wraps, and apparel decorating. The Women in Graphics panel will shine a light on business successes and challenges the panelists have faced and how you can use their experiences to shape your own future. Directly following the panel, don't miss a networking event, sponsored by Arlon Graphics, with these leaders and Christine Geronimo with Colorways and Women of Wraps. Here's some of what you can expect to learn:

- The biggest lessons they've learned throughout their careers
- Key industry trends and challenges on their radar
- How AI and other tech is reshaping their work
- The best new tools, techniques and processes they are using
- How to mentor or support the next generation of female leaders
- And much, much more!

Get to know the panel:



Dawn Marie Legatt, *Seven Arrows*
Dawn Marie is a creative entrepreneur and business coach who's passionate about helping makers turn their skills into scalable, profitable businesses. After building a successful DIY sign party business from scratch — while raising seven kids — she expanded into the laser world and has helped thousands of creators along the way. She's the founder of Seven Arrows, a multibrand platform that includes memberships, courses, and tools designed to help entrepreneurs grow with clarity and confidence.



Kristin Lanzarone, *WrapStar Pro*
Meet Kristin, the dynamic force behind WrapStar Pro with over a decade of entrepreneurial success. Certified in multiple brands and a revered multibrand trainer, Kristin shapes industry standards while empowering the next generation. Beyond business, Kristin's dedication to community involvement and advocacy is unparalleled. Her efforts have earned her prestigious awards such as the Women in Wide Format Award 2021 and the Best of Wide Format Award 2024, underscoring her leadership and impact within the industry. Join Kristin on the panel as she shares insights, experiences, and a vision for the future of the industry, drawing upon her expertise as the face of the "Master the Wrap" Initiative training program and a multibrand trainer to inspire others to reach new heights of success.



Jen Carney, *Carbon Wraps and Women of Wraps*
Part of a husband-and-wife team, Jen has owned and operated Carbon Wraps in Orlando, Florida, since 2009. The company started as and continues to be a primarily color change and vehicle restyling shop. Jen started on the business side of things and began focusing more on installations over a decade ago. The team travels as 3M authorized trainers and are opening a 3M authorized training facility. Jen also heads up Women of Wraps, where women in the industry can be highlighted for their accomplishments. Her attention to detail and love for the wrap world is also utilized as a judge at GPX WRAPSCON's Wrap Olympics.



Nicole Pape, *Embellishr*
Nicole Pape is the founder and CEO of Embellishr, a marketplace for premium pre-owned and new production equipment, serving the apparel, promo, and print decoration industries. With nearly two decades of hands-on experience in high-output environments, Nicole built her career from the ground up, mastering everything from manual printing to full-scale automation and production optimization. Before founding Embellishr in 2022, Nicole was a partner in a major West Coast commercial embellishment facility and held a pivotal role with equipment manufacturer ROQ US. Based in Reno, Nevada, Nicole is also a proud mom to an 8-year-old son, a visual artist, and a lifelong lover of architecture, travel, and creative expression. GP

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Roll-to-roll printers provide flexibility

Here's what to look for in your next machine

By Bill Schiffner

If you are in the market for a new printer for your shop, one of the best options to look for is a roll-to-roll unit. Roll-to-roll printers provide a host of options for sign shops as these resourceful machines produce incredible quality at high production speeds while offering the flexibility to produce a plethora of jobs.

The total versatility of roll-to-roll printers enables different configurations with dye sub and textiles ink sets for the fashion apparel, home decor, flags and soft signage markets, as well as solvent and UV configurations for the sign and graphics markets and water-based ink sets for the fine art and photography markets, as well as vinyl and canvas banners to backlit signs and vehicle wraps.

We spoke to a number of suppliers and asked them what shops should look for and what things to consider when purchasing a new roll-to-roll machine.



This vehicle wrap was produced on the Canon Colorado M-Series printer.



Top: Colorado M-series customers have the ability to print on roll-to-roll media up to 1.6mm thick, expanding the range of materials that can be used for interior decor and wallcovering applications.

Bottom: The Canon Colorado M-series has been on the market for two years.
(Images courtesy of Canon USA Inc.)

More automated options

Patrick Donigain, senior manager, LFP Business Planning & Strategy Group at Canon USA, said the roll-to-roll printing market is seeing a strong push toward automation, versatility,



The new DIMENSE DA-640 large-format dimensional surface printer delivers high-quality printed and paintable 3D embossed texture up to 2mm in height on roll-to-roll media, in a compact system.



This backlit sign was created on the Roland TrueVIS LG series.



The Roland DG TrueVIS XP-640 eco-solvent printer boasts newly designed dual staggered printheads and high-speed data control that maximize productivity while delivering vibrant, detailed prints. *(Images courtesy of Roland DGA)*

and sustainability. "Printers that offer modular upgrades, low maintenance, and high uptime, while reducing operator interaction, are gaining traction. There's also a growing demand for white ink capabilities and smart ink technologies that reduce waste and improve color consistency."

Jeff Dilley, regional sales manager at Fluid Color, noted that the biggest trends for 2025 in roll-to-roll printing continue to center around automation, versatility, and sustainability. "Customers are demanding faster turnaround times with fewer touchpoints, leading to the integration of automated take-up systems, in-line finishing, and advanced RIP software that allows for efficient nesting and job planning. Sustainability is also at the forefront, with eco-conscious brands seeking printers that can operate with low VOC UV-LED inks and energy-efficient curing systems."

Hybrids growing in popularity

Dilley added that hybrid platforms capable of both roll and rigid printing are gaining popularity. "This reflects a shift in the industry toward maximizing machine ROI by expanding a single printer's capabilities. We're seeing greater adoption of our UV LED roll-to-roll systems because of their ability to run extended shifts with minimal maintenance and handle a broad array of media types — critical for clients aiming to consolidate equipment and reduce overhead."

Tony Simmering, product manager at MUTOH, said that the growth of the home or small-scale crafting market has opened an entire channel dedicated to people seeking a solution that is more advanced and more capable than something like a color-change vinyl cutter. "A big push is being made for products that offer multiple purposes, like printing and cutting. Surprisingly, printhead technology hasn't jumped the shark yet and is advancing a ton in these last few years. We are able to produce much higher fidelity printers at greater speeds, using lower resolutions/



MUTOH's new XpertJet-C641SR Pro 24" eco-solvent printer/cutter combo is designed for a wide range of applications such as stickers, T-shirt transfers, vehicle decals, posters, and banners.



The MUTOH XpertJet 1641SR Pro 64" eco-solvent single head, 4-color (CMYK) printer is ideal for wraps. *(Images courtesy of MUTOH America Inc.)*

pass counts. Another factor to consider is that these new printheads are much more robust than previous generations and become overall less of a burden for maintenance," he pointed out.

Daniel Valade, product manager of digital print for Roland DGA, is seeing an increased user demand for roll-to-roll printers and printer/cutters that offer greater versatility, outstanding image quality, and increased production capability while keeping operating costs low. "When it comes to research and development, our focus has been on innovation that allows for a wider color gamut that expands creative opportunities and allows for improved color accuracy," he said.

Advancements in technology

Dilley pointed out that recent advancements in roll-to-roll technology include higher-speed printheads, improved media handling with tension control systems, and enhanced curing technology using adjustable-zone UV LED modules. "These updates allow printers to produce vibrant, durable output at production speeds of over 4,000 square feet per hour, making them competitive with traditional analog methods in terms of throughput."

Dilley said another key feature is the increasing use of variable drop technology, which allows printheads to jet multiple droplet sizes within a single pass. "This improves both the fidelity of fine details and the saturation of solid fills. Our roll-to-roll printers utilize advanced grayscale technology and multiple-row printheads to balance speed, price, and quality across diverse applications — ranging from high-end retail signage to long-run outdoor banners."

Consider before buying

Donigain said some questions to ask and important points to consider include:

- **Media versatility:** Can the printer handle a wide range of substrates? Does the system allow you to use lower-cost media or novel media that expand your revenue streams?
- **Ink technology:** Look for low temperature curing and low VOC emissions, as well as whether it meets industry standards, without exceptions, such as Green Guard Gold, MCS, ICS, OCS, or ASTM type II.
- **Operational efficiency:** Consider automation features and unattended printing capabilities, as well as whether the printer ink combination eliminates the need for additional steps, such as lamination, or requires long drying times before prints are able to be laminated.
- **Scalability:** Can the printer evolve with your business needs? What is required to add capabilities or productivity?

"Printers that offer low total cost of ownership and minimal operator intervention tend to provide the best long-term value," he pointed out.

Dilley explained that when



The MUTOH XpertJet 1641SR Pro 64" Eco-Solvent single head, 4-color (CMYK) printer is ideal for wraps. *(Image courtesy of MUTOH America Inc.)*



The 70" LED roll-to-roll is marketed for its fast speeds and high quality.

considering a roll-to-roll printer, buyers should assess production volume, media compatibility, ink requirements, and workflow integration. "For example, if you're working in environments with frequent material changes or short-run customization needs, you'll want a printer with fast setup and intuitive RIP software that can streamline layout and color management."

He said to also think about post-sale support and consumables. "Many lower-cost printers lock users into expensive proprietary inks or offer minimal service infrastructure. We build open, modular systems that are easy to service and run on high-quality but competitively priced inks — delivering lower total cost of ownership and less downtime over the lifespan of the printer."

Valade added that first and foremost, before making any purchase, "it's important to choose a manufacturer that stands behind the quality of the products they offer and will be with you every step of the way after the purchase to help ensure your ongoing satisfaction, growth, and success."

Valade continued, "Equally important is to make sure you are investing in a versatile and reliable machine that will allow you to effectively handle the applications you'll be offering, meet your production and turnaround requirements, and consistently deliver vivid, detailed, long-lasting output quickly and cost-effectively. You'll want to invest in a technologically advanced, dependable, easy-to-use device that consistently prints high-quality, precision output day in and day out with minimal downtime. After all, the name of the game is being able to meet or, even better, exceed the demands of your customers while achieving maximum profitability. That requires a device that will allow you to accept more jobs, quickly produce high-quality output, increase your production capability, meet tight turnaround times, and keep operating costs as low as possible."

The price of ink in tough tariff times

Simmering noted that even though many manufacturers are willing to subsidize printer pricing in this (hopefully) short-term tariff volatility, something consumers need to look at is ink pricing.

"MUTOH manufactures our inks in Japan and anticipates steady ink pricing, so our customers have the confidence to grow with us," he stated. "There is no perfect ink that does everything (no matter how much a sales manager tries to convince you otherwise)."

Simmering said that eco-solvent inks are traditionally the prime candidate for general-purpose signage like posters, banners, stickers, etc., as they have great outdoor durability and an excellent color gamut.

"UV roll-to-roll is becoming popular due to the capability to print with white ink, as well as produce embellishments like texture; the downside being limited outdoor use. Dye-sublimation is the ultimate solution for extremely durable long-term graphics like silicone edge graphics, metal panels, and trade show/event/brand signage."

He added that MUTOH also offers a specialty "multipurpose" ink that allows for applications such as packaging prototyping and proofing on coated and uncoated materials, giving print houses, designers, and brands accurate color and finish capabilities without having to conduct large-scale press runs.

Advantages of roll-to-roll over flatbeds

Valade states there are several advantages that roll-to-roll printers have over other inkjet model types, like flatbeds. "While both roll-to-roll and flatbed printers deliver vibrant, detailed high-resolution prints, roll-to-roll models offer faster print speeds, job versatility, media flexibility, and cost-effectiveness. Roll-to-roll inkjets can also handle a wide range of flexible media (vinyl, paper, fabric, etc.), whereas flatbeds are primarily designed to print on rigid substrates and 3D objects."

He continued, "The smaller size of roll-to-roll printers allows them to fit into many spaces that large-format flatbeds can't, and the capacity of the roll media they use makes these printers and printer/cutters ideal for both short runs and higher-volume production. They can also run continuously and unattended, which allows for greater convenience and productivity, and they can be more cost-effective, especially when jobs involve large quantities of similar prints such as posters or stickers."

Donigain said roll-to-roll printers excel in continuous production, especially for long runs of flexible media like banners, vehicle wraps, and wall coverings. "They typically offer faster throughput and lower media costs compared to flatbeds. Additionally, roll-to-roll systems are often more compact and easier to integrate into existing workflows, especially when space is limited. Printers that can handle multi-layer printing, including white ink on transparent or colored media, are especially in demand for these applications."

Simmering pointed out that one of the biggest advantages that roll-to-roll has over other printing options is



The latest offering from Fluid Color is the Z126R LED roll-to-roll printer with Kyocera printheads. *(Images courtesy of Fluid Color)*

the ability to print large, continuous pieces. "Wrapping a city bus would be an extremely cumbersome job if it was required to panel out into a ton of pieces." He added that vehicle and structural graphics/wraps, stickers, banners, posters, DTF apparel, promotional items, and cut-and-sew apparel are some of the top applications produced on these machines.

Dilley feels that roll-to-roll printers shine in high-volume, continuous print environments. "They are ideal for applications such as banners, vehicle wraps, and window graphics where roll media is standard. Compared to flatbeds, roll-to-roll systems offer faster throughput for flexible materials and lower media waste since there's no need for masking or taping media onto a vacuum bed.

"Moreover, roll-to-roll platforms often have a smaller physical footprint and simpler loading/unloading workflows, making them ideal for production environments where space and speed are priorities. While flatbeds excel at rigid substrates, a well-configured roll-to-roll printer can output thousands of square feet per shift at a fraction of the operator labor and media prep time," he said.

Dilley explained that popular applications for roll-to-roll printers include soft signage, window graphics, wall coverings, vehicle wraps, event graphics, and backlit displays. Additionally, many clients use roll-to-roll printers for short-run packaging prototypes and personalized promotional items. The versatility of these systems — especially when paired with white and varnish ink options, opens up opportunities for specialty graphics with high visual impact. With the rise of e-commerce and short-run branding, the need for versatile, just-in-time production capabilities is higher than ever."

What is the best ink type?

Valade said whatever roll-to-roll printer type you choose to go with, it's important to use OEM inks that are specially formulated to bring out the best in that type of machine. "Each ink type has its own distinct advantages for specific applications."

"For example, eco-solvent inks offer excellent print quality and outstanding outdoor durability; latex inks also produce vivid, detailed prints, but are more environmentally friendly, allowing them to be place in sensitive spaces like hospitals or schools, and require less outgassing time before lamination; UV inks don't have the same durability and stretchability as eco-solvent inks, but they image beautifully as well and dry instantly under the printer's powerful UV light, plus they allow for gloss ink printing effects that add dimensional effects to prints; dye-sublimation inks are better for printing on fabrics and textiles as they soak into the fabric instead of chemically adhering to the surface. Each ink set has its pros and cons, depending upon the applications the print provider wants to offer."

What's the application?

"The best ink really depends on the application. For general signage and outdoor durability, UV-LED inks are the top choice — they offer excellent adhesion to a variety of substrates, low curing temperatures, and instant cure times, which means faster finishing and no off-gassing delays," said Dilley. "We exclusively use LED-curable UV inks because they offer vibrant color, durability, and eco-friendly benefits like low VOC emissions and energy-efficient curing."

"For textile applications, dye-sublimation remains the preferred option due to its color vibrancy and wash resistance, but it does require coated polyester and a separate sublimation process. Solvent and eco-solvent inks are still viable for some outdoor graphics, but they often come with higher VOC emissions and slower dry times compared to UV-LED. Latex offers a middle ground with water-based chemistry and environmental certifications, but printhead lifespan and maintenance costs remain considerations," Dilley added.

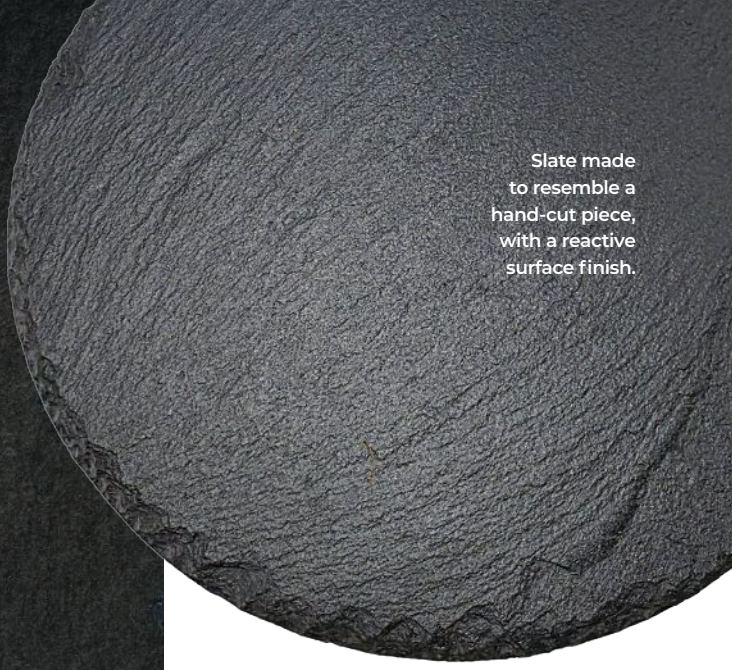
Donigain noted that each ink type has its niche. UV gel ink is gaining attention for its instant drying, low-temperature curing, and exceptional durability. "As the newest class of large-format inks, it is known for its vibrant color, scratch resistance, and efficient ink usage. These qualities make it ideal for both indoor and outdoor applications, often eliminating the need for lamination. Solvent inks are a great solution for applications requiring extreme stretch, while latex inks can offer certain safety advantages in their uncured form compared to solvent or UV inks in their uncured states." **GP**



Bill Schiffner, a former freelance writer/editor based in Holbrook, New York, covered the imaging industry for over 25 years. He was the editor for several imaging publications and websites. He can be reached at bschiffner@optonline.ne

Engraving slate 101

By John Morman



Slate made to resemble a hand-cut piece, with a reactive surface finish.

I'd like to take the time to talk about working with more unusual materials — in this case, slate. It's possible to achieve high-contrast, detailed designs on slate, making it suitable as an alternative to materials like glass, wood, or ceramic. Similar to glass, the laser essentially pulverizes the surface to get to the finished engraving. As usual, a good graphic is essential, as are clean optics and precise focusing.

Slate

What is slate? Slate is a fine-grained, clayey metamorphic rock that splits into thin slabs that have great tensile strength and durability. Slate can appear as black, blue, purple, red, green, or gray. Dark slates usually owe their color to carbonaceous material or finely divided iron sulfide. Reddish and purple varieties owe their color to the presence of hematite (iron oxide), and green varieties owe theirs to the presence of chlorite, a green micaceous clay mineral.



A piece with a milled surface and edges, with no surface finish. (Images courtesy of John Morman)

It's a great alternative for items used in home decor, commemorative pieces, or unique gifts. Slate is a very sturdy material and is ideally suited for placement outdoors. It is very hard, so it isn't possible to get anything beyond a light surface marking. This also means that you can't cut slate with a CO_2 laser — you can cut it yourself with a tile cutter, or with a fine diamond blade, but remember its hardness makes it very prone to shattering. If you're lucky enough to know someone with a waterjet, that's the best option. If you need to drill holes in the piece, I recommend first applying masking tape to help avoid chipping. Use a high-quality carbide-tipped drill at a low speed and apply light pressure. Don't try to pass through the piece in one go — back out every so often and then proceed again slowly.

If you don't, there's no need to despair! Slate can be purchased in a variety of shapes and sizes. The material can be obtained in two forms: what I would term raw or finished. The raw material is simply slate with no precoat or reactive coating. (If you get raw material, you can apply a light coat of a satin lacquer to make the graphic stand out a little better, or you can apply the coat after the engraving process.) Finished slate has had a pre-coat or reactive finish already applied. Slate blankware can also be purchased either milled, so the surfaces and edges are flat and smooth, or with surfaces and edges that are rough-hewn, cut to resemble a hand-cut piece.

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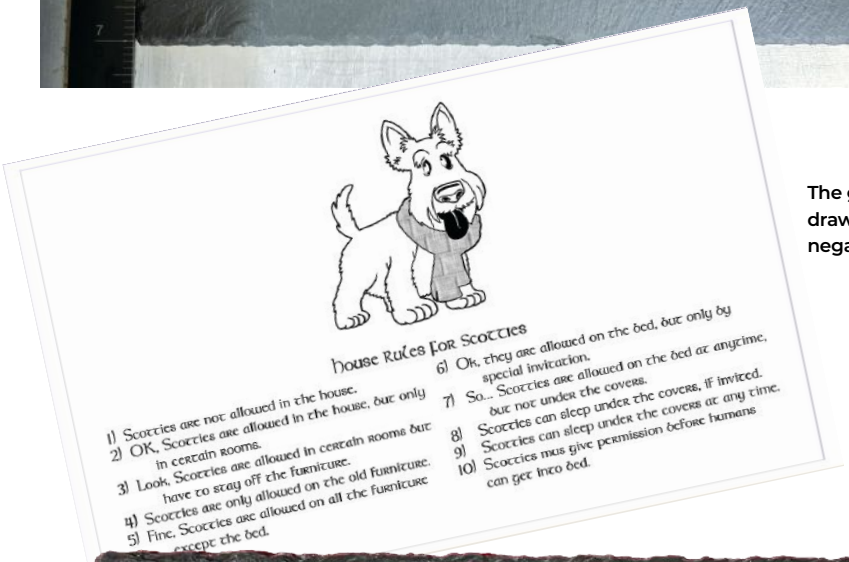
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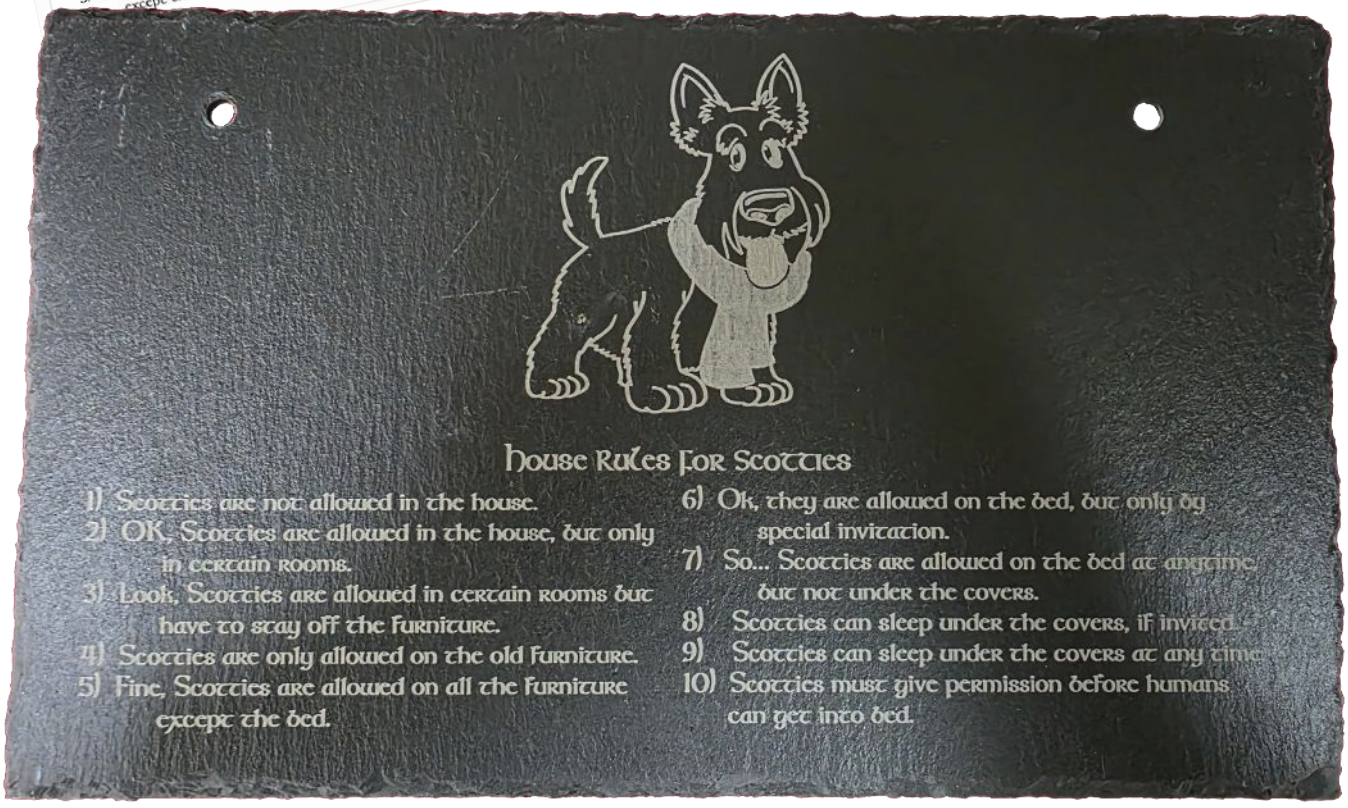


The piece is set up on the machine bed, aligned according to the predrilled holes.



The graphic, drawn as a negative.

Slate is almost exclusively a binary material — that is, the engraving is dark gray to black or white. It doesn't matter how many passes you run or how many different power settings you use. Therefore, your graphic is created in black and white with little or no shading in grayscale. (As you gain experience with your graphics software and your machine, you can adjust your graphics to make some adjustments and achieve some shading.) The mind-bending part of the design is that you have to create the image as a negative. Black areas will be engraved white, and white areas will not be engraved. It sounds simple, but if there is any detail included in the graphic, remembering which parts are black or white on the finished piece can get confusing. For that reason, the first time you run slate you probably will want to have an extra piece to confirm the graphic is correct, and you can test



The final result.

the power and speed settings. You can then make any adjustments necessary before running the piece.

Engraving slate

Getting started: Make sure the optics are clean. You do need to give yourself the very best chance to obtain a clean, sharp image. Next, position the slate in the machine. With a piece that has had edges milled, lining up the material is simple. The smooth edges will sit against the horizontal and vertical guides. (As always, I'm using my machines for reference; different machines are constructed differently.) With pieces cut to resemble hand-cut, positioning the piece can be a little more awkward. Producing the hand-cut piece often results in blanks that aren't nice and square. In this case, you'll need to position the piece as best you can to get the best position for your graphic. Pieces intended for hanging should come with predrilled holes for attaching a cord. I use the holes as a guideline for positioning. Assuming the holes were drilled uniformly, using the holes to guide your positioning should give a piece that will hang properly.

Now to the engraving: Once you have the blank slate aligned properly, focus the laser head. It's essential to make sure you have the focus precise, and as stated earlier, make sure the optics are clean. Select your settings — if your machine has an extensive materials database, choose the setting for hard marble. If you don't have the database, set the power to 100% and the speed between 80-90%. Experience will tell you what is best.

Run the graphic, and when finished, clean the piece to remove any debris from the surface. You should now have a new material to add to your inventory! **GP**



John Morman is the owner of Celtic Tides in Lexington, Virginia. He and his wife, Mary Jo, have been running the shop since 2005. John started laser engraving in 2003.



Sublimation beyond soft goods

A guide to hard surface sublimation success

By Jackie Faeth

Novelty products like socks and pajamas with faces of fiancés and pets have popularized sublimation in the personalization industry for its ability to create vibrant, full-color, permanent prints on soft fabrics. Items like T-shirts, tote bags, and socks sell well and have a strong place in the market, but if you've only used sublimation for textiles, you're missing out on a whole world of creative and profitable opportunities!

Sublimating hard goods, like photo panels, mugs, coasters, signage, and home decor, opens new doors for personalization, business growth, and custom product development. With the right techniques, accessories, and materials, you can easily expand your offerings beyond soft goods and start sublimating a wide range of rigid items.

Whether you're an experienced sublimator or just starting out, this guide will walk you through the key differences, must-know tips, and best-selling hard goods to help you take your sublimation skills and sales to the next level.



Images courtesy of Johnson Plastics Plus

What makes sublimating hard goods different?

At its core, the sublimation process is the same: a design is printed using sublimation ink on special transfer paper, then heat and pressure are used to transfer the design to a blank surface. However, there are a few things to consider when sublimating hard goods versus textiles.

1. Surface requirements

Unlike fabrics, which can sublimate with a vintage look if they have some polyester content, hard substrates must have a poly-coated surface to accept sublimation ink. This coating is what allows the ink to turn into a gas and permanently bond with the item's surface. You can't sublimate onto raw wood, untreated ceramic, or plain metal without that special coating. Look for products labeled as "sublimation ready" or "sublimation coated."

2. Heat press equipment

You'll need heat presses that accommodate the shape of your hard goods:

- Flat heat press for plaques, photo panels, coasters, and signage
- Mug press or tumbler press for drinkware
- Convection oven and shrink sleeves for uniquely shaped or oversized items like planters
- Each item may have different time, temperature, and pressure settings, so always consult the product's pressing instructions.

Common troubleshooting tips for sublimating hard goods

Even experienced sublimators run into issues from time to time. Here are a few of the most common problems and how to fix them:

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1. Ghosting or blurry edges
Cause: Movement of the transfer paper during pressing or lifting.
Solution: Use heat-resistant tape to secure the transfer. For items like mugs or tumblers, sublimation wraps or shrink sleeves can also help hold transfers tightly in place.

2. Faded or incomplete transfers
Cause: Incorrect temperature, time, or insufficient pressure.
Solution: Double-check the recommended press settings for each blank. For flat items, medium to firm pressure is typically required. Use a heat gun or infrared thermometer to verify your press is reaching the right temperature.

3. Uneven transfers or white spots
Cause: Dust, lint, or moisture trapped between the transfer and surface
Solution: Wipe surfaces with a lint-free cloth or microfiber towel before pressing. For ceramic or metal items, pre-press or preheat them for a few seconds to evaporate any moisture. You can also use butcher paper or blowout paper between your item and the press to help absorb moisture and prevent ink bleed.

4. Ink gassing or bleed-through
Cause: Using low-quality transfer paper or over-pressing.
Solution: Stick with high-quality sublimation paper designed for hard goods, and follow the



manufacturer's suggested press times closely. Longer doesn't always mean better!

Must-have accessories for hard good sublimation

If you're planning to expand into sublimating rigid substrates, a few tools and supplies will make a big difference:

- **Heat-resistant tape:** Keeps transfers secure and prevents shifting
- **Silicone wraps or shrink sleeves:** Great for mugs, tumblers, and irregular items
- **Blowout paper:** Protects your press from ink bleed
- **Lint roller or microfiber cloth:** Removes dust or debris from surfaces
- **Heat gloves:** Essential for safely removing hot items from your press

Bestselling hard goods for sublimation

There's a huge market for custom sublimated products outside of T-shirts and tote bags. These are some of the most popular (and profitable) hard goods you can offer:

1. Photo panels

High-definition aluminum or MDF photo panels are perfect for memorials, gifts, and home decor. Their vibrant color and glossy or matte finish make photographs look professional and striking.

Great for: Graduation gifts, pet memorials, and family.

2. Home decor

Custom signs, trivets, cutting boards, wall tiles, and ornaments are ideal for holidays, weddings, and everyday home personalization.

Great for: Realtors, housewarming gifts, and holiday craft shows.

Pro tip: Use themed designs or monograms to increase appeal.

3. Signage

Sublimation signage offers fade-resistant durability, making it perfect for indoor and semi-outdoor applications. Use it for directional signage, branding, or novelty signage.

Great for: Offices, restrooms, event venues, and maker spaces.

4. Pet accessories

People love to personalize items for their pets. Sublimatable pet tags, bowls, mats, and leashes are both functional and fun to decorate.

Great for: Groomers, pet boutiques, and online shops.

Design tip: Offer breed-specific graphics or funny phrases.





5. Plaques & awards
Custom plaques for sports teams, businesses, or schools are a huge hit. Sublimation allows for full-color logos, text, and photos, all in one piece.

Great for: Coaches, teachers, and corporate gifts.

Look for: MDF or aluminum plaque blanks with display stands.

Tips for getting started with hard goods sublimation

If you're ready to branch out from apparel, here's how to make your hard goods transition a smooth one:

- **Start small:** Try coasters or ornaments first — they're inexpensive, forgiving, and easy to practice on.
- **Use templates:** Most suppliers offer downloadable print templates so your designs fit the product perfectly.
- **Keep a press log:** Record times, temperatures, and results for each material so you can repeat your successes.
- **Bundle products:** Create themed sets (like a mug and coaster combo) to increase value and boost average order size.
- **Photograph everything:** Great product photos make a huge difference in listings or social media posts.

Go beyond tees

Sublimation is more than just a T-shirt printing method; it's a gateway to endless customization opportunities. By learning how to work with hard goods and using the right techniques, accessories, and materials, you can expand your creative horizons and grow your business with high-quality, durable products that are sure to stand out in any market.

Whether you're personalizing gifts, decorating homes, or offering full-color branding solutions, hard surface sublimation gives you the power to do more — with color that lasts. **GP**





Jackie Faeth has been with The Rowmark Group since 2018 and currently works as marketing coordinator with a focus on content development.





Roland DGA DIMENSE DA-640 dimensional surface printer

Roland DGA has announced the launch of the new DIMENSE DA-640, a state-of-the art wide-format dimensional surface printer engineered to produce full-color prints with unique embossing effects more easily and cost-effectively than alternative methods, allowing for high-value, high-impact output across a range of applications, on-demand. Equipped with newly developed printheads engineered to deliver stunning output, the DA-640 is the centerpiece of the DIMENSE solution, which also consists of specialized media that raises up to 2mm in thickness when exposed to heat in the printer and a structural ink that precisely controls where the embossing occurs on the print. The DA-640's advanced design, simple operation, and streamlined workflow are engineered to ensure outstanding productivity, while low running costs and media waste reduction features maximize profitability. Features a built-in 7" touchscreen display, a newly designed torque-based take-up system, and an advanced 14-zone heater system. **rolanddga.com**

Avery Dennison Supreme Wrapping Film blues



Avery Dennison has premiered two new colors for its Supreme Wrapping Film line: Gloss Park Avenue Blue and Gloss Turquoise Ocean. Supreme Wrapping Film color change vehicle wraps feature Avery Dennison Easy Apply RS technology, engineered to make application faster and easier, regardless of the skill level of the applicator. The technology enables installers to reposition the film and press out any wrinkles and bubbles. Moreover, the film and technology is designed to ensure ensures conformability around challenging curves and recesses. **graphics.averydennison.com/swf**



Ninja Transfers spangles

Ninja Transfers has introduced spangles to its expanding lineup of decoration techniques. Spangles, an embellishment style made of reflective flat discs heat-applied to garments, are becoming a favorite among apparel decorators. Unlike rhinestones, Spangles have no sharp edges and are designed to be lighter, smoother, and more durable. The machines used for applying Spangles are highly-modified embroidery platforms designed to precisely place individual sequins in custom designs with speed and consistency. **ninjatransfers.com**

PRODUCT PICKS



WeCreat Lumos laser

WeCreat's new Lumos is said to be the only portable galvo system to combine a 3W Infrared (IR) Laser, a 10W Diode Laser, and what the company calls an engineering breakthrough named BeamFocus 2.0, an optical innovation using a custom Nd:YAG crystal cube to supercharge every laser pulse. The Lumos is constructed with a Galvo system — the same kind used in high-speed industrial lasers, where mirrors redirect the beam at speeds up to 4000mm/s. Lumos is engineered to handle contours with up to 10mm of depth, allowing for the engraving of 3D shapes without the need for surface flattening. Imagine personalizing curved wood panels, custom tools, or even helmets are said to remain sharp and precise, even on a slope. **wecreat.com**



Cotton canvas totes from Q-Tees

Q-Tees cotton canvas totes are crafted from natural, biodegradable materials and are designed for long-term use. With reinforced stitching and durable handles, the totes are designed to be used for everything from daily errands to cross-country adventures. With rising demand for eco-friendly and sustainable products, the totes are said to appeal to consumers who prioritize environmentally responsible options. Featuring cotton canvas material and designed with a large imprint area, these totes ideal for customization through embroidery, screen-printing, or other design applications. **qtees.com**



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WEDNESDAY, AUGUST 20

10 a.m. — 4 p.m.

Hirsch Solutions LLC – Building a Successful Apparel Decorating Business

THURSDAY, AUGUST 21

8 — 9:30 a.m.

Epilog Laser – Laser Mastery: Engraving Essentials for Beginners START HERE

All American Print Supply Co – DTF Clinic: Common Mistakes (and How to Avoid Them) START HERE

WRAPSCON University – Streamlining Wrap Design Projects: From Sales to Installation, *with Jody Frego*

11 a.m. — 12:30 p.m.

TheMagicTouch USA – How to Maximize Your Profits Using the Crio Powderless DTF PLUS START HERE

JDS Industries – Troubleshooting Sublimation START HERE

General Formulations Inc – Which Glue is Right for You? START HERE

1 — 2:30 p.m.

Trotec Laser Inc – Enhance Your Business with Laser Solutions START HERE

Restylers International – 1 + 1 = 20 - Two Simple Steps to Add 20% to Your Bottom Line PRO

4 — 5:30 p.m.

CorelTRAINER – CorelDRAW is Easy! Let's See Exactly How! START HERE

Decorate Smarter: A Masterclass in Growth, Clarity & Getting Out of Your Own Way, *with Nicole Pape*

4 — 6 p.m.

Meet the Masters @ WRAPSconnect – Panel Discussion and Happy Hour, *Sponsored by: The Bad Wrap*

FRIDAY, AUGUST 22

8 — 9:30 a.m.

Inktavo – Maximizing Shop Efficiency and Sales for Apparel Decoration and Signage Businesses

Women in Graphics Panel, *Sponsored by: Arlon Graphics LLC*

11 a.m. — 12:30 p.m.

PDS Equipment – Current 2025 Business Development Strategies for Laser, UV Print, DTF, HTV, and Embroidery

IKONICS Imaging – From Skills to Sales: Hands-On Sandcarving Strategies for High-Margin Markets START HERE

GRAPHICS PRO – Lessons in Apparel Decoration: Your Guide to Screenprinting in 2025, Part 1, *with Lon Winters*

1 — 2:30 p.m.

Advertising Specialty Institute (ASI) – Profit with Promo: Expanding Your Business Through Promo Product Sales START HERE

Procolored Technology Inc – Dive into Color: Procolored Printer Quickstart START HERE

Stratojet USA – When is the Right Time to Have a Flatbed Printer START HERE

4 — 5:30 p.m.

GPX University – Beyond 6 Figures: Strategies to Scale Beyond the Blueprint, *with Stan Banks*

GRAPHICS PRO– AI Revisited: A Playbook for Transforming Your Business Operations, *with Marshall Atkinson*

Inktavo – Sell Smarter: How Online Stores Drive Sales for Apparel Decorators & Sign Shops

SATURDAY, AUGUST 23

8 — 9:30 a.m.

GRAPHICS PRO – Becoming an Engraving Expert: Top Tips for Beginners & Intermediates, *with Lori Champagne*

GPX University – Organic Growth Engine: The Local-First Digital Marketing System, *with Stan Banks*

GRAPHICS PRO – From $500K to $1M: What You Need to Do to Take Your Shop to the Next Level in 2025, *with Marshall Atkinson*

11 a.m. — 12:30 p.m.

GRAPHICS PRO – Lessons in Apparel Decoration: Your Guide to Screenprinting in 2025, Part 2, *with Lon Winters*

AI and Automation for Print Shops: From Marketing to Fulfillment, *with Cole Lundstrom*



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The vinyl wraps industry is approaching $6B a year in sales with vehicle wraps being the majority. Have you ever wanted to get into vehicle wraps or need to hone your skills and best practices? There's no better place than GPX Long Beach to see how it's done.

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Staying cool under pressure

Developing a resilient entrepreneurial mindset

By Aaron Montgomery

A simple box of chocolates

Back in my twenties, I was a pretty terrible salesman. I was working for a label printing company, starving for commission, and terrified of being told "No." So, naturally, I avoided making calls. Which is not ideal when your job is literally to make sales calls.

Thankfully, I had a sales manager who saw what I didn't. He didn't try to turn me into a sales robot or pump me up with empty pep talks. He just gave me a better way to measure success. "Don't focus on the yeses," he said. "Let's count the no responses instead." Once I hit 20 no responses in a day, I was done for the day. Suddenly, I was looking for reasons to make calls. I even had a favorite lead on my list, a candy company called Patsy's Candies. For six straight months, I got nowhere. But one day, dragging myself toward my 20 noes, I called anyway. And something weird happened. They put me through to the owner, who invited me to come in and meet with him. It turned out to be the largest sales of my career to that point, and with the newfound confidence, I asked him, "What changed?"

He didn't say a word. He just handed me a box of Sees Candies, which is their biggest competitor. That was the gift they got from their current label supplier as a thank-you for the business. I didn't close the deal because I finally nailed the perfect pitch or performed some kind of sales magic. I just kept showing up.

That's what resilience looks like. It's staying in the game, especially when you're unsure. If you run a small business, pressure is part of the ride. But when you learn how to keep your cool, think clearly, and stay focused on what matters most, pressure stops being the villain. It becomes a training partner.



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What's pressure really about?

Pressure isn't the event. It's how we respond to events. The same situation can stress one person out and light a fire under someone else. Running a business brings pressure. Orders pile up. Customers change their minds. Equipment breaks. Someone on your team drops the ball. And somehow, you're still expected to make decisions, keep things moving, and not completely lose your cool.

Now, let's be honest. Some days it's tempting to throw up your hands and say, "Forget it." The question isn't if the pressure will come. It's how you'll show up when it does. This is where the mindset shift comes in. Entrepreneurs aren't built to just survive stress. We're wired to get creative inside of it. That doesn't mean you never feel the squeeze. It means you stop letting the pressure make your decisions for you. When the going gets tough, successful entrepreneurs will ask, "What can I do next that will make a difference?" It's a slight shift from looking for all the problems or reasons why things

will not work, to insisting that there is always a solution somewhere if you're willing to look and sacrifice your story.

One of the biggest myths out there is that the problem is time. But if you've ever had a full day open up on your calendar and somehow still didn't get the important stuff done, you already know time isn't the issue. It's clarity. It's staying cool enough to see what matters and then acting on it, one step at a time.

Pressure isn't your enemy. It's just loud. It gets in your head, speeds up your heart, and tries to rush your thinking. But you don't have to play along if you intentionally slow it down and ask better questions. Take the next clear step.

Why resilience beats hustle every time

There's this badge of honor people like to wear called hustle. Work harder and sleep less. But if hustle was the answer, we'd all be billionaires by now, as I don't know many people who are not grinding themselves down. I fall into this trap, and I remind myself that resilience is different. It's not about forcing your way through everything. It's about keeping your peace when things get messy. Not ignoring the mess or making it your story that you share on social media.

When we talk about a resilient mindset, we're really talking about trust and faith. Trusting that you can handle what comes and that it's okay to pause and think instead of sprinting headfirst into every fire. A big part of this is learning how to think like an owner instead of an employee. Even employees will get miles ahead by changing their thinking. But thinking like an owner doesn't mean taking on everything. It means you're responsible for the bigger picture.

This came up for me and my wife, Kylene, not long ago. We were looking at how we spent our weekends. From Monday to Friday, we had it down. But Saturdays and Sundays? That's where we hit a snag. I could feel her hesitating when I tried to plan anything business-related. Then I stumbled on a quote that said, "Use the weekend to build the life you want instead of trying to escape the life you have." That said, to us, "Make choices your future self will thank you for."

That's what the entrepreneurial mindset is. Kylene grew up with a different rhythm. The weekend was for rest. And honestly, there's nothing wrong with that. But what helped both of us was realizing we weren't really talking about hours or schedules. We were talking about ownership. About being intentional with our time.

Whether that means spending Sunday sketching a new product idea or taking Monday morning off to eat lunch with your kid at school, the point is the same. You get to choose. And when you really own that, the pressure starts to lose its grip. You stop thinking in terms of "what I have to do" and start thinking in terms of "what I get to do."

The goal here isn't to pretend stress doesn't exist. It's to train your brain to respond differently when the stress shows up. And that starts by thinking like an entrepreneur, not an employee. Many business owners I work with seem to want to be an employee with an opinion. They want someone to tell them what to do until it gets uncomfortable, so they can blame someone else. We are all 100% responsible for our own business and life.

Staying cool when the going gets tough

There will be days when the orders are late, your inbox is on fire, and nothing seems to go right. I don't need to tell you this; you are a business owner or professional in the graphics space. You're doing your best, but it still feels like you're being pulled in 10 different directions. And that's when you need some simple tools to quiet the noise and bring your attention back to what matters.

Start with progress over perfection. If your brain wants to go into panic mode and start a hundred things at once, stop and set a timer. Pick one task and give it 20 minutes of focused effort. You'll be amazed how that tiny win resets your whole system.

Ask better questions. Instead of, "Why is this happening to me?" try, "What is this teaching me, and how can I do it differently next time?" One question keeps you stuck in the story. The other one keeps you moving.

If you've got a big challenge staring you in the face, don't just think about solving it. Think about who can help. Resilient people don't try to muscle through everything alone. They lean on their community. That might be a mentor, a mastermind group, or even just a fellow business owner who understands what it's like. I know from experience that surrounding yourself with people who challenge and support you can make a difference. If you feel like you are alone in this, reach out to me. It's literally what I do.

Your mindset is your superpower

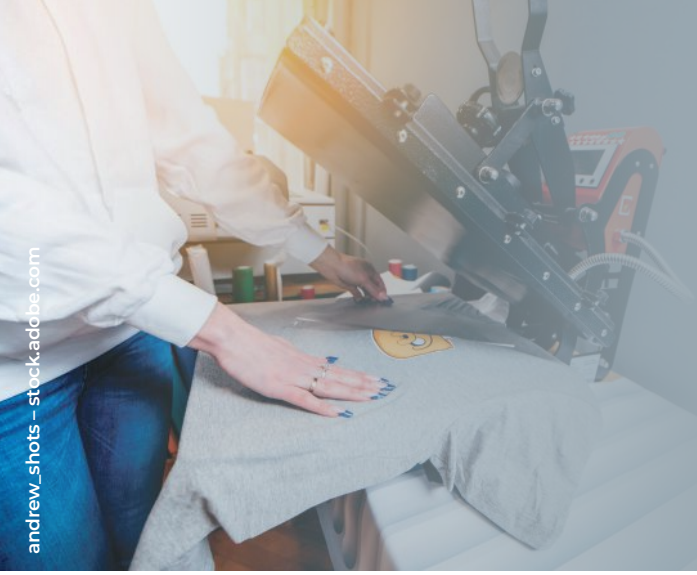
The biggest gift you can give your business is a mindset that knows how to stand up when the pressure comes. Not a mindset that ignores hard things, but one that says, "I can figure this out. I'm not alone. I'm built for this."

When I look back at that moment with the candy company, I see it so clearly now. I didn't get the win because I forced it. I got it because I kept showing up. That's the choice we all have, every day. Will we let pressure shape our story? Or will we use it to sharpen our mindset?

You have more power than you think. You get to decide what you build. You get to choose how you respond. And most of all, you get to make decisions your future self will thank you for. You've got this. **GP**



Aaron Montgomery's company, Our Success Group, assists with business plans and pricing strategies, as well as customer service and marketing. He is the author of "The FUNdamentals of Business Success" and the co-founder of a facilitated six-month mastermind collective called Radical Goal-Getters. Aaron also co-hosts the 2 Regular Guys podcast.



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From kitchen table to clothing brand

How DTF transfers are powering the new wave of solo entrepreneurs

By Sid Gaffar

In basements, spare bedrooms, and garage workbenches across the country, a quiet but significant movement is taking shape — powered not by venture capital or flashy tech, but by heat presses, blank tees, and direct-to-film (DTF) transfers.

Thanks to this innovative printing method, a growing number of solo entrepreneurs are building apparel brands from home — some as side gigs, others as full-time ventures. It's a low-risk, high-reward entry point into the booming world of custom merchandise, and it's turning everyday creators into business owners.

The side hustle era meets DTF

The U.S. is experiencing a side hustle boom. According to recent surveys, nearly half of working adults now run some form of income-generating project outside their primary job. For many, selling custom T-shirts and branded gear has become a go-to choice — and DTF printing is playing a starring role.

Unlike traditional methods like screen printing or direct-to-garment (DTG) printing, DTF doesn't require major equipment, messy inks, or large production runs. All that is needed is a heat press, a stack of blank garments, and a set of ready-to-press DTF transfers. DTF allows someone to start producing retail-quality apparel with less than $500 in startup costs, and it's perfect for people who want to test the waters before investing in expensive equipment.

Low cost, high impact

For side hustlers looking to break into the apparel space, the economics of DTF are hard to ignore. A basic setup — heat press, blanks, and preprinted transfers — can cost less than $300 to get started. The process is simple: press the transfer onto the garment, peel, and you're done.

With finished shirts typically selling for $20 to $30, and production costs around $7 to $9, even a modest weekly output of 10 to 15 shirts can generate hundreds in monthly profits.

And because you don't need to print designs yourself, the entire workflow can be handled from a kitchen counter or folding table. Creators focus on branding, customer engagement, and product design while outsourcing the printing itself to providers like our company, Mugsie, a supplier of DTF transfers and tools designed specifically for beginners.



Images courtesy of Sid Gaffar

Building a brand from home

Many of today's DTF-powered side businesses aren't just about one-off T-shirts — they're the seeds of real brands. From catchy slogans and niche communities to local pride and influencer merch, solo entrepreneurs are finding loyal audiences by tapping into identity, humor, and style.

Using online marketplaces like Etsy or social platforms like Instagram and TikTok, these at-home creators are competing with big-name retailers — offering fast turnarounds, personalized service, and trend-savvy designs.

DTF printing makes it possible to test new ideas quickly and pivot fast. You can launch a mini collection, get real feedback, and build a customer base — all without ever touching a printer.



The democratization of apparel printing

What used to require a full-blown print shop and commercial equipment is now accessible to virtually anyone with a vision and a heat press. That shift is democratizing the apparel industry, opening doors for artists, stay-at-home parents, students, and creatives to participate — and profit.

Of course, success still requires more than just good tools. The winners are the ones who put time into design, customer service, and understanding their audience. DTF makes the logistics easy — but building a brand takes hustle.

Pressing ahead

The rise of DTF transfers is more than a tech trend — it's a reflection of how the modern economy is changing. People want flexible income, creative freedom, and low barriers to entry. With DTF, they're getting exactly that.

For the graphics and print industry, it's an exciting time. Whether you're a supplier, print shop, or side hustler, this wave of solo creators is reshaping the landscape — and proving that big ideas can start on a small press in a spare room. **GP**



Sid Gaffar is the founder of Mugsie.com, bringing premium DTF transfers and sublimation printing to creators since 2017. Starting in UK print shops at 17, Sid's journey from screen printing enthusiast to business owner reflects his passion for helping brands grow through quality and genuine partnerships.



Auto compositing

Automated Photoshop techniques that modify image content

By Stephen Romaniello

azkiyanaila taleta - stock.adobe.com

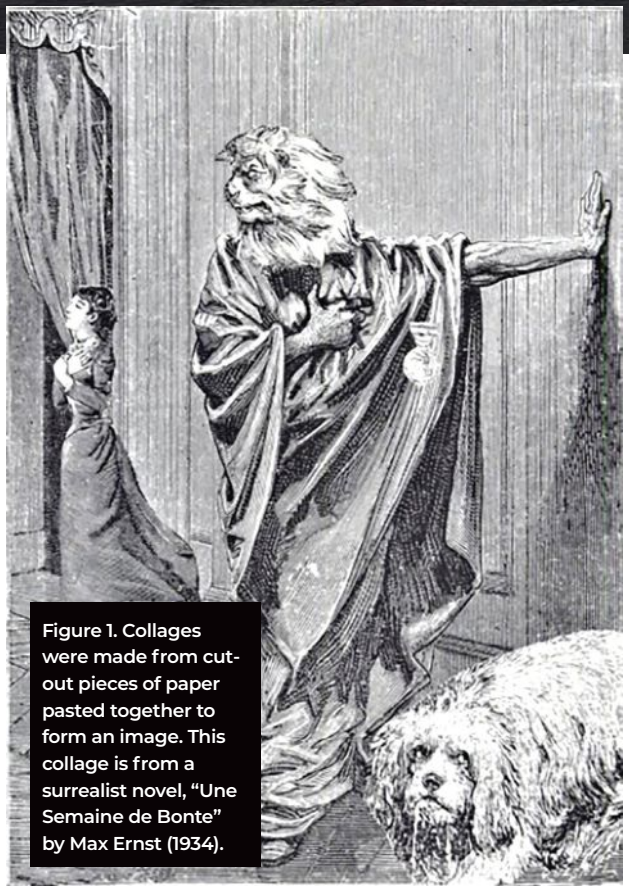


Figure 1. Collages were made from cut-out pieces of paper pasted together to form an image. This collage is from a surrealist novel, "Une Semaine de Bonte" by Max Ernst (1934).

The methods used for modifying digital pictures certainly have evolved over the past few years. Color manipulation, tonal adjusting, and filtering have seen the introduction of new innovations that make these processes more user-friendly and more comprehensive. When you think about it, there are many ways to alter images to tell a specific story: wether to recolor an image to create a certain mood, or to apply a filter to turn a photo into a painting or, most commonly, to alter the actual physical content of a picture. So ubiquitous are these processes nowadays that a new adjective has been added to the English language. When an image has been manipulated it is commonly said that it has been "Photoshopped."

Among the many image-altering techniques that can "Photoshop" a picture, filtering, color and tonal enhancement, and content replacement are at the top of the list. Several methods have been introduced over the past few years that dramatically alter the image modification workflow. A few of these techniques analyze the existing content of an image and reapply portions of the data within a selected area. Other, even more automated techniques generate new content using artificial intelligence (AI) and the vast archive of image content in the cloud.

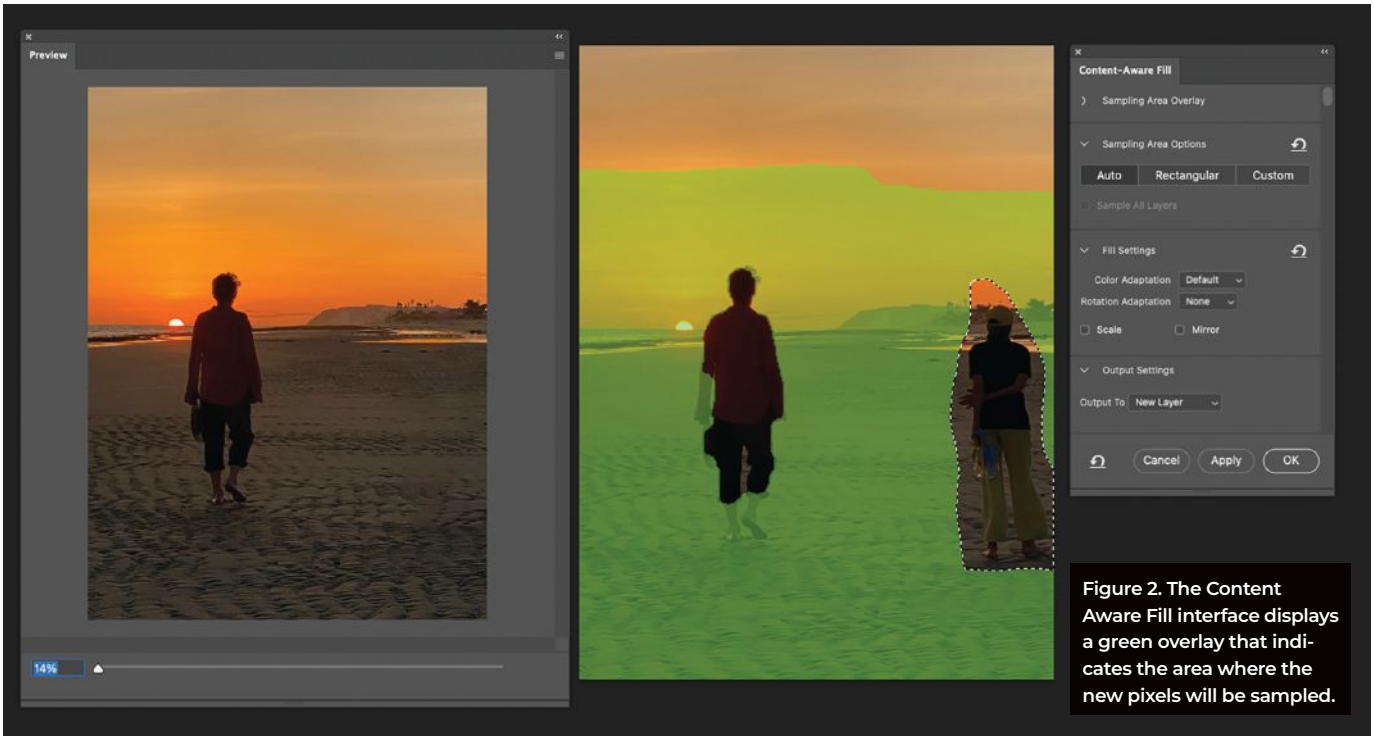


Figure 2. The Content Aware Fill interface displays a green overlay that indicates the area where the new pixels will be sampled.

Fundamentals

Before we get into the techniques, there are a couple of basic rules that need to be observed when compositing images so that the union of two or more images appears seamless. First, feathered edges of the selected area produce a smooth transition zone. A feather is a group of edge pixels that range from opaque on the inside and gradually become more transparent as they radiate outward over a specific distance. Feathering the edge of a selection softens it so that source content seamlessly blends into the destination background.

Next, consistent lighting is essential to produce credible results. Shadows should be cast in similar directions depending on the position of the light source and highlights and reflections should be located on the same sides of objects of both source and destination images. If possible, choose images whose light sources are similar. A more radical choice is to flip or rotate the source content so that the light source corresponds to the destination image.

Collage

A composite image is created with content from multiple sources. Another word for a composite is a collage. Artists have been making collages since the mid-nineteenth century. Back in the day, collages were made from cut-out pieces of paper pasted together to form an image **(Fig.1)**. Nowadays, the digital collage workflow is faster and more versatile, providing a vast array of extraordinary features that enhance the credibility of the composite.

Content awareness

When Content Aware features were first introduced to Photoshop, end-users were amazed and delighted. Finally, we no longer had to rely on the cumbersome Clone Stamp tool and it's tedious select and paint method to composite large areas. The Content Aware Fill feature is not a tool, but an interface that fills areas with pixels that are automatically sampled from the image. It's quite intuitive as it measures the outside edges of the target area and finds areas within the image that will seamlessly blend into them. Most of the time it works well providing that your target area is not too large. Content Aware Fill has nifty controls that determine where the new content is sampled.

Here's how it works: First, use one of the selection tools with a one- or two-pixel feather to encircle the destination area. I find that slightly overlapping an adjacent texture by just a few pixels with the selection outline makes for a more seamless blend and determines the fill content. Then choose Edit > Content Aware Fill.

The interface **(Fig. 2)** displays a green overlay that indicates the area where the new pixels will be sampled. The green overlay can be modified with a brush to add or subtract potential sample content. A nice preview window displays how the image will look with the new content. The window refreshes automatically when you modify the overlay. When the composite looks acceptable, click OK. By default, the new content is generated on a new layer.

The Content Aware Fill feature can be a real time saver. If the results aren't perfect, you can always go back and tweak the filled areas with one of the retouching tools like the Healing Brush or the Clone Stamp to manually retouch tiny areas where you have unwanted content.

Content Aware Scale

Speaking of content awareness, let me mention the Content Aware Scale feature. Content Aware scale resizes images intelligently, preserving important visual content such as people, buildings, or objects while reducing or expanding less important

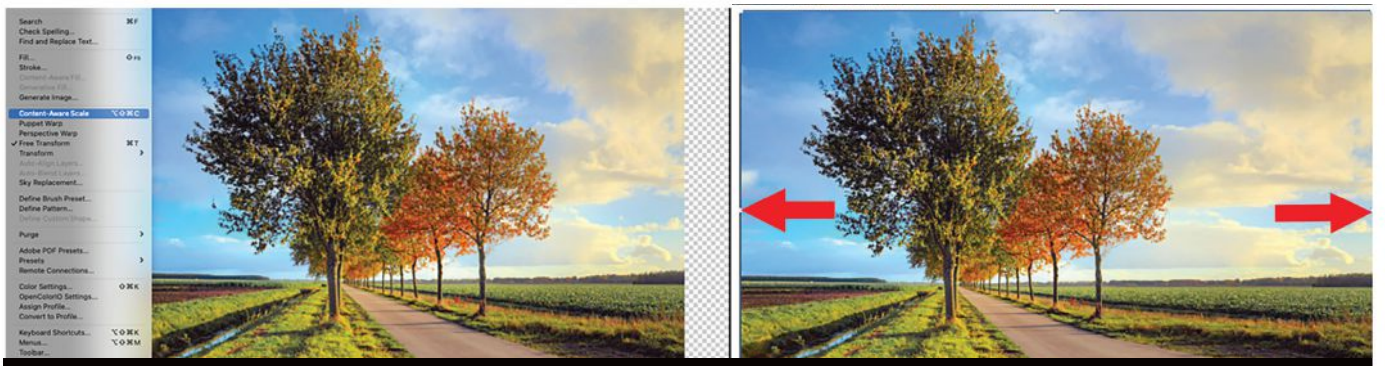


Figure 3. Drag the handles of the Content Aware Scale marquee to scale it horizontally or vertically.

areas, sky, background, or grass.

Instead of stretching or squishing the entire image uniformly as standard scaling does, Content-Aware Scale analyzes the image and protects key visual elements from distortion. It also stretches or compresses areas with less detail or importance such as solid backgrounds or textures.

It's simple to use:

1. Add canvas to the image to accommodate the new larger size.
2. Select the content of the layer you want to scale.
3. Choose to Edit > Content-Aware Scale.
4. Drag the handles on the image to scale it horizontally or vertically **(Fig. 3)**.
5. Press Shift or Alt depending on the platform to scale more freely.
6. Click the checkmark in the Options bar to apply the change.

Generative Expand

An alternative to Content Aware Scale is the AI-driven Generative Expand feature. It enables users to extend or expand the edges of an image seamlessly using AI-generated content that matches the original scene.

It produces context-aware expansion that fills newly added canvas areas with realistic, stylistically consistent content that is based on the existing image **(Fig. 4)**.

You can guide the expansion by typing a prompt, for example "add mountains in the background," or you can leave the prompt blank and let AI generate pixels based on the existing content. The content is generated on a new layer, preserving your original image. It can change the aspect ratio without cropping or add background for design flexibility. Here's how:

1. Select the Crop tool and enable the Generative Expand option in the Options bar.
2. Drag the Crop tool marquee outside the edges of the canvas to add additional space
3. Type a prompt or just click Generate. The canvas expands with new content.
4. Photoshop generates three options to choose from in the Properties panel. Pick the best one.

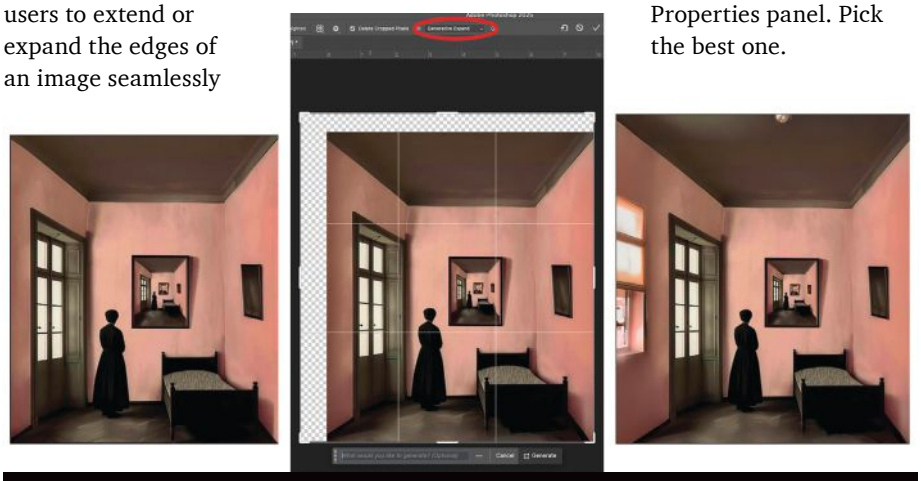


Figure 4. Generative Expand adds context-aware expansion that fills newly added canvas areas with realistic, stylistically consistent content based on the existing image.

Neural Filters

Neural Filters are a set of AI-powered routines that apply complex image edits quickly and easily. Neural Filters use machine learning, a branch of AI that enable computers to learn from sampled data without being specifically programmed. Simply stated, machine learning allows computers to identify patterns in data and make decisions based on those patterns. Neural filters are designed to simplify traditionally time-consuming or technically difficult tasks, such as retouching, colorizing, or changing facial expressions. Neural Filters require a compatible GPU and sufficient RAM. Some of the filters are cloud-based, so internet access is essential.

The Key Features of Neural Filters include AI-Powered Adjustments. Using Adobe Sensei, Adobe's AI/ML platform, these filters use neural networks to analyze and modify images intelligently. Most Neural Filters are applied on new layers or with smart filters so that the edits are nondestructive and can be applied without compromising the original image. Sliders and checkboxes in the interface of each filter make it easy to apply effects **(Fig. 5)**.

These are the types of current Neural Filters:

- **Skin Smoothing**: Automatically smooths skin while preserving detail.
- **Colorize**: Adds color to black-and-white photos intelligently.
- **Style Transfer**: Applies the style of one image (e.g., painting) to another.
- **Super Zoom**: Enhances and enlarges parts of an image.
- **Smart Portrait**: Adjust facial features, expressions, gaze direction, lighting, and more.

- **Depth Blur**: Simulates depth of field and background blur.
- **Neural Filters:** These are available in the interface but are still being beta tested:
- **Photo Restoration**: Revives old, damaged, or faded photographs.
- **Harmonization**: Matches the color and tone of two different layers.
- **Landscape Mixer**: Blends elements of one landscape into another.
- **Color Transfer**: Matches the color palette of another image.
- **Face Cleanup**: Enhances and cleans facial features in a stylized way.

Uses for Neural Filters include quickly retouching portraits, restoring old photos, experimenting with creative styles, and easily changing facial expressions.

Generative Fill

The Generative Fill is an AI feature that adds, removes, or modifies elements in an image using text prompts. It is powered by Adobe Firefly, Adobe's generative AI model.

With Generative Fill, objects can be added to an image based on a text description **(Fig. 6)**. It's also used to remove unwanted elements by selecting and pressing the "Generative Fill" button and replacing elements or backgrounds with realistic, context aware images. Changes appear as a new Generative Layer that you can revert or tweak without compromising the original. The AI model automatically attempts to match lighting, perspective, shadows, and texture on the new content. Three variations are generated in the properties panel. Choose the best one or apply Generative Fill again with a more precise text prompt. Try it!

1. Open a RGB, 8-bit image.
2. Select an area with any selection tool The new content will usually fill the selection.
3. On the Contextual Task Bar enter a text prompt, or leave it blank to remove content.
4. Click Generate.

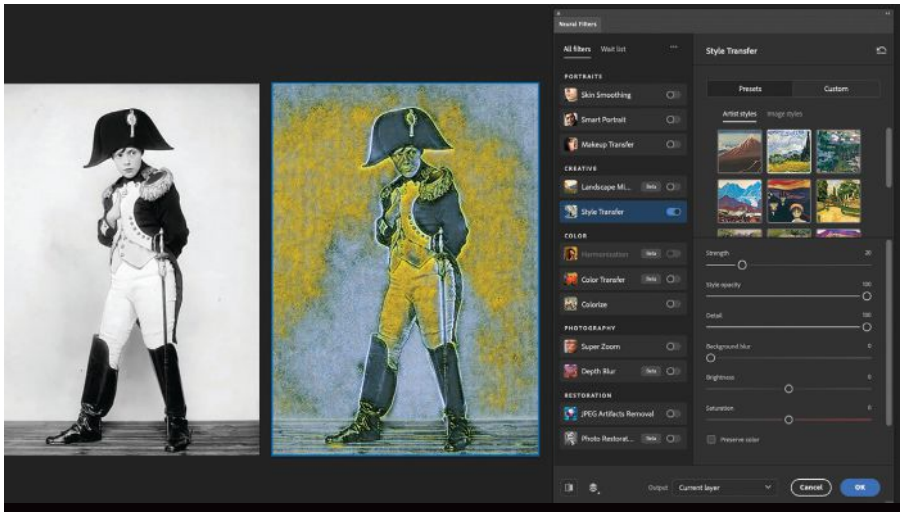


Figure 5. Sliders and checkboxes in the Neural Filter interface make it easy to apply effects.

5. In the Properties panel, choose from the three generated results. Each one appears on a new generative layer.

New realities

Compositing is a powerful way to invent new realities or change existing ones. These techniques are most often a source of creative fun as we stretch our imaginations to invent fanciful images that tell a story. The new AI powered Generative Fill, Generative Expand, and Neural Filters are a welcome addition to further stimulate your creative impulses.

Content replacement plays a big part of the image editing process. Seamless editing is a skill that is dependent not only the ease and functionality of the software, but your ability to conceive and experiment. Of course, all the methods require a close examination with your critical eye to assure that the results are perfect. While the techniques can be used to deceive, they are most often a source of creative fun as we stretch our imaginations to invent new realities. The fact that images can look so convincing after they've been altered and are so easy to generate should be motivation for you experiment with content replacement. **GP**



Stephen Romaniello is an artist and educator who has seen the evolution of digital graphics since the beginning of the digital revolution in the 1980s. He is CEO of GlobalEye Systems, a graphics software and creative imaging consultancy, and founder of Gorilla Geeks, a creative consulting firm.

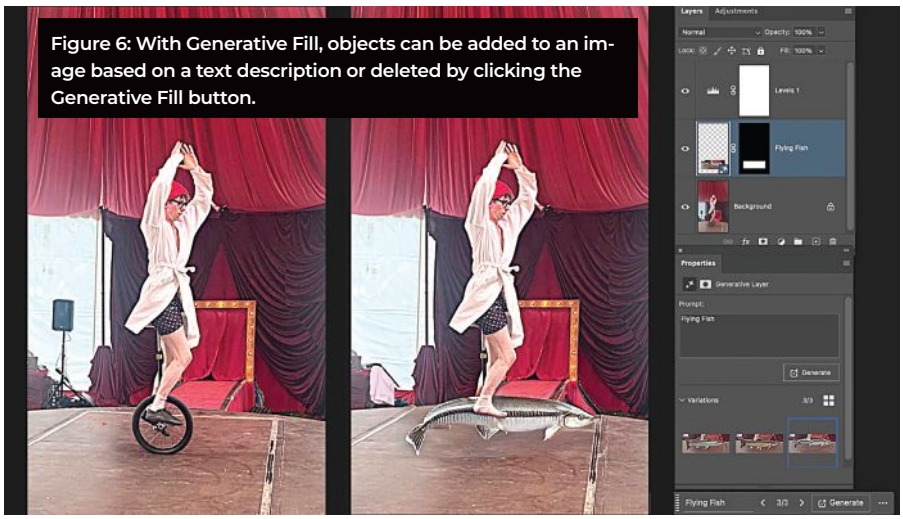


Figure 6: With Generative Fill, objects can be added to an image based on a text description or deleted by clicking the Generative Fill button.



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FRIDAY, SEPTEMBER 12

8 — 9:30 a.m.

Epilog Laser – Laser Mastery: Engraving Essentials for Beginners START HERE

11 a.m. — 12:30 p.m.

Advertising Specialty Institute (ASI) – Profit with Promo: Expanding Your Business Through Promo Product Sales START HERE

1 — 2:30 p.m.

TheMagicTouch USA – How to Maximize Your Profits Using the Crio Powderless DTF PLUS START HERE

Inktavo – Maximizing Shop Efficiency and Sales for Apparel Decoration and Signage Businesses

3 — 4:30 p.m.

GRAPHICS PRO – Lessons in Apparel Decoration: Your Guide to Screenprinting in 2025, Part 1, *with Lon Winters*

GRAPHICS PRO – Becoming an Engraving Expert: Top Tips for Beginners and Intermediates, *with Lori Champagne*

SATURDAY, SEPTEMBER 13

8 — 9:30 a.m.

GRAPHICS PRO – AI Revisited: A Playbook for Transforming Your Business Operations, *with Marshall Atkinson*

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A look inside direct-to-film printing

From films to ink, heat & transfer issues

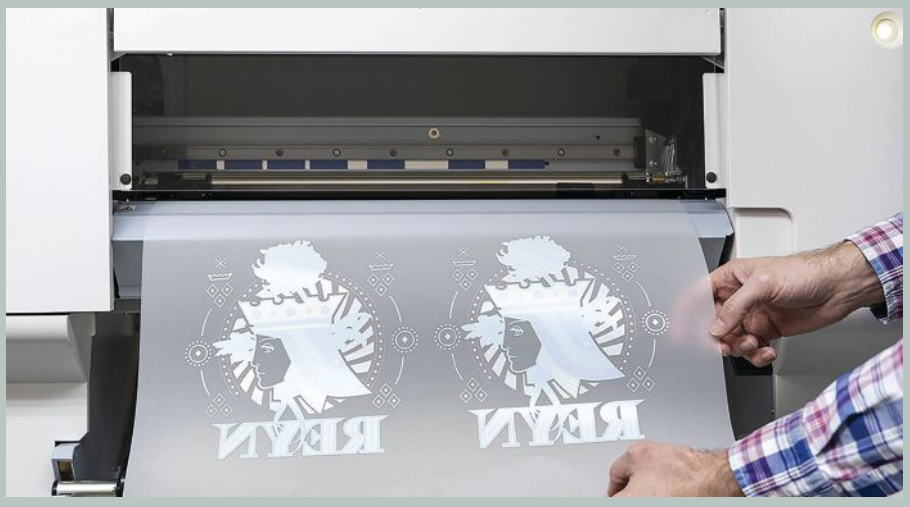
By Paula Aven Gladych

Over the past 20-plus years, direct-to-film (DTF) printing technology has continued to advance to the point where it has become one of the most popular ways to decorate fabrics and apparel on demand.

Designs are digitally printed or screen printed onto transfer film. The film is then placed onto a garment, and the design is transferred onto the fabric using a heat press. One advantage of DTF compared to direct-to-garment printing is that DTF can be more cost-effective for larger orders that require colorful and photo-realistic prints.

Films & finishes

"DTF printing primarily uses coated polyethylene terephthalate or PET film, a strong, clear, and flexible plastic film made from polyester," said Tim Check, senior product manager of professional imaging for Epson America. "The film comes in different finishes, with cold peel, hot peel, and hybrid peel variants being the most popular for DTF film applications. Transfers can be printed ahead of time and stored for later use, offering flexibility for on-demand heat application."









PET film works well for industrial applications because of its "excellent strength, chemical resistance, and dimensional stability," he said.

Depending on the application and transfer timeline, there are minor differences between the different film finishes.

Hot peel transfers allow for immediate peeling after it is put through the heat press, which speeds up production cycles. Cold peel transfers require cooling before peeling, which can improve the transfer's adhesion and durability, especially on textured or thicker fabrics, he said.

Hybrid peels offer a balance, allowing partial cooling for easier handling without compromising quality.

Sergio Ramirez, marketing manager at Supacolor in California, said his company uses all recyclable PET film with a hot peel process.

"It has been fun to see all the things we are developing, paving the way for heat transfers to be a more accepted thing," he said.

Supacolor decided to use hot peel over cold peel because it wanted to be more efficient in a high-production environment. Most of its customers are screen shops and printers. "When pressing 400 T-shirts, setting them aside and re-pressing them later is not as efficient vs. peeling right there and done," Ramirez said.

The inks

Supacolor uses water-based inks in CMYK with its own formulation of adhesive that is used on both digitally-printed and screen-printed transfers. Some companies use UV inks to print their transfers.

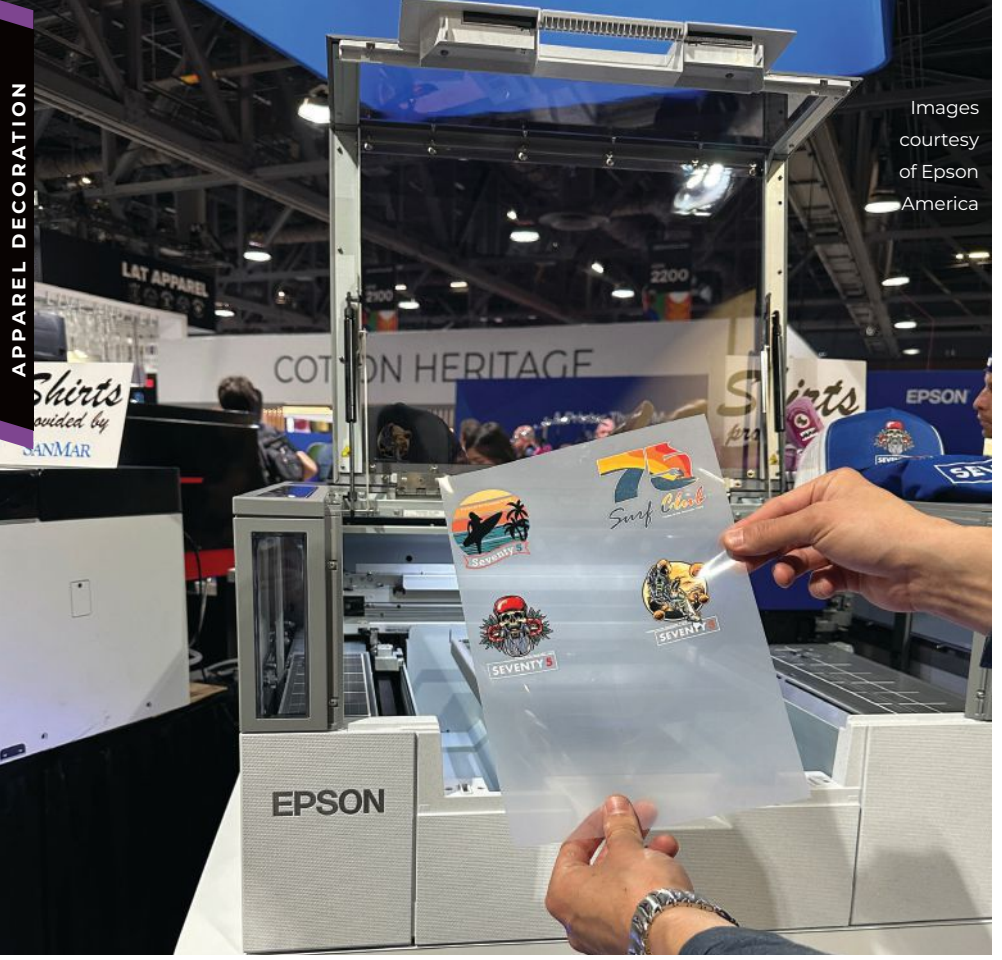
Ramirez said that water-based inks give transfers washability and longevity. When DTF first started, transfers would last 20 to 50 washes. Now they will last 80 to 100-plus washes.



Images courtesy of Roland DGA







Images courtesy of Epson America



The company uses both screen printing and digital printing for its hybrid DTF transfers. First, a white ink base is screen printed onto the film. Then, the colors are applied on top of the white using a seven-color digital process. An adhesive is applied to the top and cured.

"Not many people are doing it the way we do," he said.

The company makes two types of transfers, a traditional transfer and what it calls SupaDTF, which is 100% digital, printed on an inkjet printer. The main difference between the two is that the SupaDTF transfer uses a water-based, seven-color process with Pantone color matching. It is also able to print metallics.

We Must in Toronto offers industrial solutions for DTF transfers, which make up 75% of the company's business. It uses water-based pigment inks that are "very environmentally friendly and skin friendly," said Amit Kumar, CEO of We Must. It offers Pantone color matching, which is new to the DTF market. The company is adding a nine-color solution that will further expand its color gamut from 350,000 possible colors to nearly a million, which is "pretty huge in terms of colors that we are able to do," he added.

The company offers silicone transfers, reflective metallic, DTF embroidered patches, single-color transfers, and digital puffs. Puffs are digitally printed in any number of colors and gradients, he said. The ink puffs up when heat is applied.

"Silicone raised prints are a very trendy thing since big brands are using it," Kumar said. "They are very popular right now."

The company's DTF embroidered patches use a combination of embroidery and DTF printing when clients want the expensive look of an embroidered patch, but their design uses color gradients that are not possible with thread. In this case, the design is printed on the patch with embroidered accents surrounding it.

Special-effect prints offer metallic

designs and reflective transfers for workwear or outerwear.



Heat & pressure

Epson's Check said that "Proper heat (typically 280–320 F or 140–160 C) and medium-to-firm pressure (30–50 PSI) are essential for ensuring a strong adhesive bond between the ink and garment. Time, temperature, and pressure should be carefully calibrated based on the fabric and transfer type to ensure durability and visual quality."

Supacolor has developed different types of transfers based on the type of garments they will be adhered to. For example, a Nike Dry-FIT polyester jersey with a pattern on it would require a blocker layer so that the fabric's pattern wouldn't show through the printed transfer.

Normal DTF transfers are applied at around 300 to 320 F, Ramirez said.

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For fabrics that might melt under high heat, the company uses low-cured adhesive heat transfers that allow a shop to press a transfer as low as 260 F, so it won't burn the garment or leave press marks on it.

"Being able to press something at that low temperature cuts out the guesswork if someone is working with an injurious item, for instance," Ramirez said.

The company also offers headwear heat transfers that can bridge the seams on a baseball cap. The transfers are printed the same way as other hybrid products, but the difference is in the adhesive formulation the company uses.

"It won't stretch out or be warped. It looks more natural, like it is part of the hat. It is not like looking at a sticker," he added.

Kumar says We Must's regular DTF transfers work on any fabric, from cotton and polyesters to blends. These transfers work best when applied at 290 F. The company's DTF Cool transfers were developed for more technical fabrics, such as rayon and nylon, that have polyester coatings that can prevent regular DTF transfers from adhering properly.

DTF Cool has a stronger adhesive and is applied at 250 to 270 F to avoid scorching. The company also sells silicone sheets that can be placed on top of the material when pressing, which also help prevent scorching.

When transferring onto dye-sublimated fabrics, the company uses a DTF dye blocker that prevents the fabric's color from bleeding through to the transfer design.

Common transfer issues

Common transfer issues include poor adhesion, ink bleeding or smudging, cracking or lifting, or powder inconsistencies, said Epson's Check.

Poor adhesion is "often due to incorrect heat or pressure settings," he said. Ink bleeding or smudging may result from over-inked film or insufficient drying. Cracking or lifting is usually caused by improper curing or incompatible fabric, and uneven adhesive powder coverage can lead to patchy transfers, he added. "In addition, aged powder can absorb moisture and clump, resulting in uneven coverage."

Check added that "Following the film and powder manufacturer's recommended specifications, and regularly maintaining your print and press equipment, can help minimize many common transfer issues."

Supacolor's hybrid process requires a lot of maintenance, Ramirez said. "You always want to make sure you are keeping it as clean as possible. The more surgical you can keep the printer, the better it will perform in the long run."

Printheads must be kept wet and never allowed to dry out. Clogged printheads can cause major headaches and cost money. "If you invest in a DTF printer, or any equipment for that matter, try treating it as if it were an immaculate show car," he said, "keep it looking good so it will perform in the way you need it to. Make sure you are always maintaining it." **GP**



Paula Aven Gladych is a freelance writer based in Denver. She can be reached at pgladych@gmail.com.


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Style 6935

Your guide to fleece & outerwear

By Milissa Gibson

What apparel decorators need to know for fall 2025



Images courtesy of Lane Seven Apparel

Fleece and outerwear aren't just seasonal add-ons anymore, and with that comes new opportunities for decorators. What once were seasonal staples are now year-round essentials and are expected to deliver on comfort, form, and printability. Many decorators are already leaning into garments that feel better, wear longer, and hold decoration in a more refined way.

Let's take a closer look at how fleece is shifting and where the creative possibilities are expanding.

Comfort is still essential, but structure and functionality are taking a more prominent role.

- **The upgraded classic:** Classic silhouettes are stepping up this season. Expect to see hoodies, pullovers, crewnecks, and full-zips that feel more intentional in both fabric and form. These styles are getting a noticeable upgrade with softer textures, cleaner seams, and structured fits that wear well and print even better. They offer a polished silhouette and a smooth, reliable surface for upscale decoration.
- **Utility-inspired:** There's something about that workwear influence that just keeps showing up, and we understand why. Heavier fleece and boxy cuts with visible stitching are gaining traction because they not only wear well but also hold heritage-inspired decoration styles like throwback prints, stitched emblems, or textured patches that hold up well and add character.
- **Athleisure:** Athleisure's grip on the market



hasn't let up, and it's pushing everyday pieces to work a little harder. These garments offer flexibility and enough structure to carry bold graphics or tonal decoration.

- **Textured & oversized:** If you thought sherpa had its moment, think again. Brushed fleece and plush textures are still going to be strong this fall. These fabrics offer a soft, plush feel and lend themselves well to more relaxed fits. Their texture adds dimension and makes them a great choice for larger graphics or subtle tonal designs that rely on the fabric itself to create visual interest.

Fall palettes are leaning grounded, desaturated, and wearable.

- **Earth tones:** Season after season, shades like deep brown, washed black, forest green, and charcoal continue to show up across collections. They're dependable, wearable, and work well with most decoration methods.
- **Muted jewel tones:** Muted jewel tones are quietly making their mark. Plums, teals, and dusky navies add just enough depth to feel fresh, without overpowering a design. These shades bring just the right amount of color to tonal designs or collections that lean softer in palette.
- **Vintage shades:** We're also seeing a return to colors that feel a little sun-faded, a little nostalgic. Mustard,





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dusty rose, and marigold work well with garment-dyed finishes and textured blanks for that broken-in, heritage feel.

- **Black & white:** Black continues to be a go-to for both versatility and bold prints. Off-white and bone tones, on the other hand, create an understated backdrop that complements everything from oversized graphics to minimal, tonal branding.

Decoration techniques are expanding into more dimensional and detail.

- **Dimensional techniques:** By adding texture and depth, decorators are creating more visually engaging pieces. 3D embroidery helps designs stand out by giving them structure and lift. Puff ink creates a raised surface that adds both texture and softness. Chenille and felt patches bring a traditional, collegiate feel that pairs well with either retro or more heavyweight fleece.
- **Tone-on-tone:** Tone-on-tone is such a fun, subtle vibe we've been seeing grow in popularity. By applying thread or ink that is only slightly darker or lighter than the garment itself, decorators are achieving subtle branding with a premium finish. This decoration style works best on blanks with smooth surfaces and reliable color consistency.
- **Oversized graphics:** Oversized graphics — especially back prints — still turn heads. The right blank gives them room to breathe and makes the design feel deliberate, not overwhelming. Choosing blanks with clean, stable construction ensures the final result looks intentional and polished.
- **Mixed media:** Layered techniques are gaining traction. Whether it's embroidery over screen print or a patch stitched onto a distressed graphic, decorators are finding ways to add depth and texture that feels intentional. Fleece with the right weight and stability makes this all possible.

No matter how creative the artwork or advanced the decoration method, it all comes down to the blank. Ask any decorator, and they'll tell you the blank makes or breaks the outcome. A garment with uneven texture or poor







structure can throw off even the most carefully planned design. But when the fit is right and the surface is smooth, every detail — color, ink, and thread — will land exactly the way it should. **GP**



Milissa Gibson is the director of sales at Lane Seven Apparel. With over a decade of experience in apparel manufacturing and product development, she collaborates with industry partners to build print-friendly apparel solutions. Learn more at lanesevenapparel.com.



Curtain call

Producing T-shirts for a school drama department

By Lon Winters



Images courtesy of Lon Winters

We've said it a time or two before. Every great production starts with a bold vision. Sometimes it's a meticulously developed art file. Sometimes it's a sketch. And sometimes, it's a crayon drawing from spirited middle schoolers with big ideas. That's where this project began, backstage with the Liberty Junior High Drama Club. A drama club is focused on theatrical arts, where members engage in activities like acting, singing, dancing, and set design to develop skills to produce performances. It's a community where young students can hone their abilities, explore their interests in the performing arts, and create a fun and engaging environment.

The kids were gearing up for their spring performances when their teachers reached out about getting some merch for the club. To get the ball rolling, he sent us the "artwork." If you've ever seen a director's notes on a bar napkin sketched in pencil, you know the vibe. This wasn't a polished file by any stretch. It was raw, joyfully creative, and hand drawn with love. This was heart-on-your-sleeve imagination straight from the kids. We could see magic in those scribbles. Our job? Put that energy onto a garment that would say, "Welcome to opening night!"

In many of these columns, we share fairly complicated projects



that sometime take weeks to create and separate, not to mention prepress involved with multiple screens, raster/vector components, split whites, split blacks, special effects, flashes, print order, and more. This month's contribution is a bit more straight forward. It's about timing and it was time to bring it down a notch — or eleven. We thought we would share a little more common and simple project we just completed recently. We like simplicity, particularly for kids.

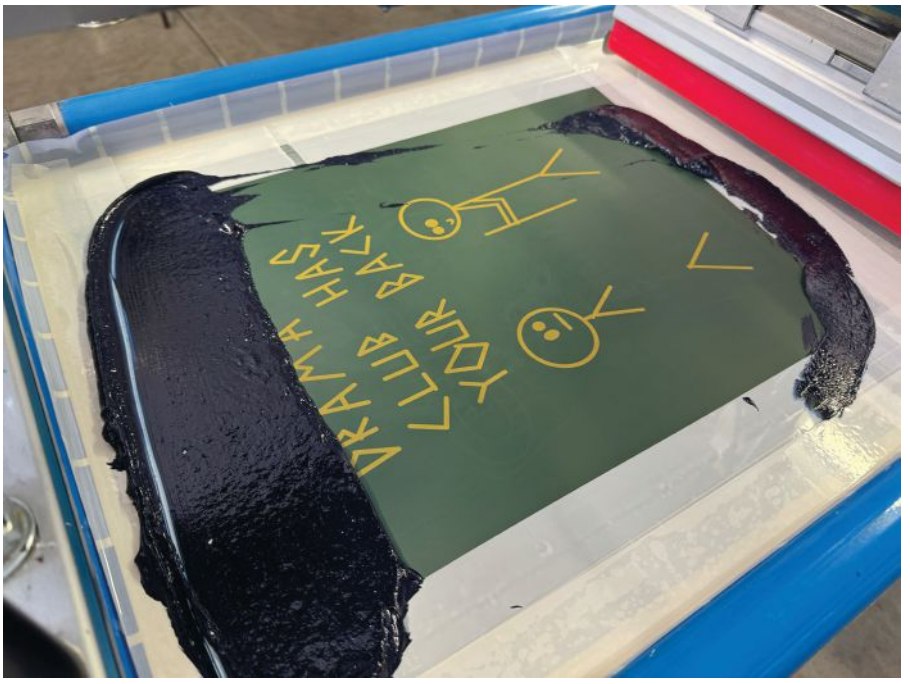
Shirt back

Let's talk back. Not like the children might, but the actual back of this shirt. The Liberty Junior High Drama Club wanted a simple basic one-color print. Something that would unify the cast and crew, from rehearsal to curtain call. We converted the original artwork, complete with stick figures and hand drawn type into a clean one-color screen print file by scanning and tracing it into Adobe Illustrator, where we would do our cleanup. We squinted a lot and laughed a little. Then we redrew nearly from scratch. We didn't just trace, we interpreted, and we adapted. We cleaned lines and added weight to give the kids' art a chance to scream from stage. Every scribble had a voice, and we weren't about to silence it. We reshaped it a bit and manipulated it into place, then locked the original. With it still selected, we made it into a spot color. Since this was for the drama club, and we weren't printing thousands of items each, more like 50, one color was the way to go. Liberty was looking for something simple, clean, and basic in concept. We outputted using computer to screen on a 156 tpi mesh at 35 N/cm. Ink choice? Straight navy using a 65/90/65 triple ply duel durometer squeegee and, dare we say, a double stroke for adequate saturation. Fabric? Bold gold cotton tees and heather gray heavy sweatshirts. Simple? Sure. But effective. That single color on those fabrics popped with a dramatic ta-da! We've said this many times: "There is something to be said for keeping things simple." And simple can be super clean and sharp. And many times preferred. Done. Screen print portion complete.



Complicated front

Here's where things got a little dicey. The front original imagery was









anything but simple. We're talking eight, maybe 10 colors, depending on from which angle we looked at it. Multiple blues, golds, orange, black, white, transitions, and more. Ugh! It's painful to separate and screen print at these numbers. The design was an explosion of childlike energy, however, complete with character silhouettes, theatrical lighting, and a dramatic typestyle. OK, not so much, but it was super-clever and creative. Screen printing that many colors would have been a logistical circus, and certainly not practical. So, we would pivot. It's what we are supposed to do these days, right? We brought in the not-so-secret weapon to complete the project. After setting up the proper file we would order in full color hybrid digital transfers. These bad boys let us preserve every detail without making ten screens and without giving our press operator a nervous breakdown. We matched the back prints perfectly, making sure everything looked cohesive and stage-ready by calling out a pms color to match our navy ink for the type. Nailed it. The transfers arrived within just a few days and were applied using heat transfer equipment. Pressure was set to a medium 40 psi with heat at 295 degrees for an even 10 seconds. If there was any magic here, it was to get an immediate hot peal release on the carrier. We kissed the adhered transfer a second time with paper for a few seconds to take off the shine and




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to make sure no corners pulled up. We gave the back side print the same kiss so it would have the same touch, feel and drape as the front.

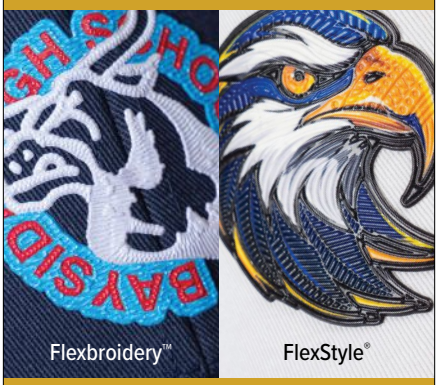
The cast and crew looked like pros, or so we were told. We like to think every shirt tells a story all its own. And for the Liberty Junior High Drama Club, we were proud to play our part behind the scenes. The kids wore their gear like armor expressing their identity. Their art, on their backs, on their stage. Sometimes the best gigs aren't the biggest. They're the ones that remind us why we started doing this in the first place, with a pencil, an idea, and a dream. Break a leg, kids. You already stole the show. **GP**



Lon Winters is founder and president of Colorado-based Graphic Elephants, an apparel decorating studio and international consulting firm. He was inducted into the Academy of Screen and Digital Printing Technologies in 2013 and is widely recognized for his contribution to the graphic printing industry. Learn more at graphicelephants.com.

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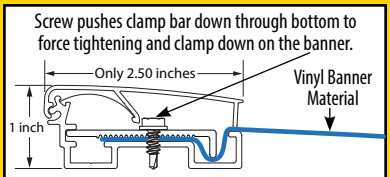
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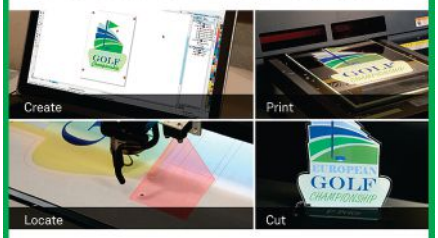
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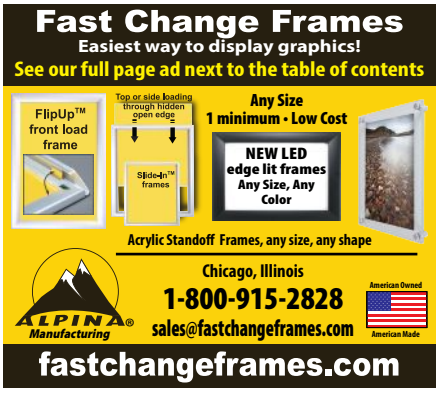


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ADVERTISER INDEX

Advertiser	Page
6Sign	5
Advertising Specialty Inst/ASI	9
Alpina Mfg LLC	3, 63, 64
AP Lazer	23
AWT World Trade Inc	62
Citadel Brands	51
Crystal D	29
General Formulations Inc	13
Gildan Activewear SRL	CVTP
Graphic Parts Intl	64
Gravotech Inc	25, 63
Hartlauer Bits	64
Hirsch Solutions LLC	57, 63
GRAPHICS PRO	**16, 41, 64**
GRAPHICS PRO EXPO	**16B**
Jackson Marking Products Co Inc	63, 64
Johnson Plastics Plus	27
LAT Apparel	53, 63
Los Angeles Apparel	62, IBC
Mutoh America Inc	1
ORAFOL Americas	15
Otto Intl Inc	7
SanMar	55
Signs365.com	FCG
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