M&R

INTRODUCES

QUATRO™

Direct to Film Transfer Printing System



THE FOURTH CHANNEL FOR PRINTED GARMENT DECORATION

M&R QUATRO™ Direct to Film Transfer Printing System

What is Direct to Film (DTF) Transfer Printing?



The M&R QUATRO (DTF) Transfer Printing System is a modern and efficient method of applying vibrant, high-quality durable images onto a wide variety of garments, and fabric types.

The DTF process begins with the creation of a digital design on a computer. Once the design is finalized, it is printed onto a special PET film with a specialized digital inkjet printer using Cyan, Magenta, Yellow, Black and White pigmented aqueous inkjet inks. After printing is complete, and while the ink is still wet, the transfer is prepared by applying a layer of adhesive to the print area.

Immediately after the adhesive has been applied, the final construction of film, ink, and adhesive is prepared for the transfer process by running it through a high efficiency infra-red drying system to cure the ink, and to fuse the adhesive to achieve a strong bond between the ink and the fabric, ensuring a durable and long-lasting print.

The garment is placed on a heat press and lightly pressed to remove excess moisture and to ensure that the fabric is transfer receptive. The film transfer is then laid on top of the garment in the correct alignment. The heat press is used to apply both heat and pressure, which activates the adhesive and causes the design to transfer from the film onto the fabric. The heat and pressure also ensure that the ink penetrates deeply into the fabric fibers, resulting in vibrant and vivid colors.

What Are the Advantages of DTF Transfer Printing?

The M&R QUATRO DTF Transfer Printing System provides several advantages over traditional apparel decorating methods:

Vibrant and High-Quality Prints
DTF printing produces vibrant and high-quality prints with excellent color accuracy and sharp details. The inks used in the process are specially formulated to provide rich and long-lasting colors, resulting in visually appealing designs.

Durability
DTF prints offer great durability and withstand regular wear and washing without fading or cracking. The ink penetrates deeply into the fabric fibers, creating a strong bond that resists peeling or deteriorating over time.

Versatility
DTF printing is compatible with a wide range of fabrics, including cotton, polyester, blends, and even more unique materials like spandex and nylon. This versatility allows for printing on various types of apparel, such as t-shirts, hoodies, hats and more.

Quick Turnaround Time
DTF printing offers a relatively quick turnaround time compared to traditional methods of printed apparel. The process involves fewer steps and no need for costly and time-consuming color separations.

Unlimited Color Options
Unlike traditional methods like screen printing, DTF printing allows for unlimited color possibilities. The CMYK+W inks used in the process enables the reproduction of complex designs with gradients, shadows and a wide gamut of colors.

Space and Labor Efficient
A complete M&R QUATRO Direct to Film Transfer Printing System, and optional M&R Dual Platten Heat Transfer Press require less than 200 ft^2 of production space, and just a single employee to operate, allowing you to enter the world of DTF garment decorating, or as an addition to your existing screenprinting, DTG printing, hybrid screen/digital printing or embroidery apparel decorating business.

M&R QUATRO™ Direct to Film Transfer Printing System

The QUATRO™ Direct to Film (DTF) Transfer Printing System is M&R's newest printing solution, giving you high-quality prints with high-quality value.

M&R QUATRO 60 cm (24") High-Resolution Industrial Inkjet Printer comes with:

- PC workstation with intuitive Graphic User Interface (GUI) and QUATRO HP RIP software - powered by CALDERA
- (4) Epson i3200 print heads: (2) CMYK and (2) White
- Bulk ink system with white ink recirculation
- Print resolution (DPI), number of passes, and print production speeds:
  - 320 x 2400 DPI, 4-Pass, 120 Linear ft/hr
  - 720 x 1800 DPI, 6-Pass, 90 Linear ft/hr
  - 720 x 2400 DPI, 8-Pass, 60 Linear ft/hr



M&R QUATRO Combination Adhesive Application System and Quartz Infrared Dryer includes:

- On-board bulk powder adhesive reservoir to promote continuous system operation
- Two base-mounted trays to capture excess powder adhesive for reuse
- Integrated exhaust filtration system
- Continuous temperature monitoring
- M&R's "Positive Link System" to ensure accurate film tracking between QUATRO printer, powder applicator and dryer





M&R QUATRO System Consumables

- QUATRO Inks are a joint development of M&R and our technology partner. All inks are manufactured in the United States to ISO 9001 quality standards.
- QUATRO PET Transfer Films and Powder Adhesives were selected after extensive testing to provide predictable performance and value.
- QUATRO system purchase includes a startup kit of DTF print consumables (inks, powder and film).



M&R QUATRO Training, Installation and Technical Support

- QUATRO system purchase includes two days of operator and maintenance training for two employees at M&R's Roselle, IL SM&RT Academy
- Ongoing VIP access to M&R's online Learning Management System (LMS) video support library and M&R 24/7/365 technical support hotline
- QUATRO System purchase price includes startup consumables kit and maintenance kit



M&R QUATRO™ Direct to Film Transfer Printing System

JOIN THE QUATRO TEAM!





T-SHIRTS

JERSEYS

HOODIES

BAGS & HATS

PRINT ON ALMOST ANY SURFACE WITH THE QUATRO!
The versatility of a DTF print is only limited by your imagination! Expand the products that you can offer your customers with different sized prints on a wide variety of garments and surfaces! No matter which team you choose, QUATRO is on your side!

Three words that QUATRO owners say most often: "Yes, We Can!"



The printed apparel decorating industry continues to evolve at a rapid pace, due to several notable trends and technology advancements that are shaping the industry:

- Growing customer demand for highly detailed, full-color prints, at lower run length and faster lead times.
- Increasing consumer demand for sustainable and eco-friendly products, requiring the garment decorating industry to implement greener practices to include utilizing water-based inks, eco-friendly substrates, and energy-efficient processes to reduce their environmental impact.
- The rise of e-commerce is providing consumers with greater access to customizable and personalized apparel. Online platforms and software have made it easier for artists, designers, and influencers to create limited-edition or print on demand collections.

The M&R QUATRO Direct to Film (DTF) Transfer Printing System was developed in response to these changing market conditions, to allow our customers to say, **"Yes, We Can!"**

M&R QUATRO™ Direct to Film Transfer Printing System

The Four Pillars of M&R QUATRO Support

QUATRO Software

The included QUATRO software bundle is programmed for ease of use and repeatable print quality. Artwork changes can be made on the fly, and push-button printing makes production a breeze.



QUATRO Inks

The QUATRO DTF transfer printer utilizes a specifically engineered CMYK + White ink set to produce full color gamut images that can be transferred to a wide range of materials with reduced make-ready time and expense of traditional apparel decorating processes.



QUATRO Film

M&R QUATRO Transfer Film comes on a 24" wide roll with 328' of available print length. Our film is carefully matched to our inks and powder to give your artwork excellent multi-peel for the best looking garments possible.



QUATRO Powder

QUATRO Adhesive Powder is where the magic happens, setting the printed inks into place on the film. Our powders are specifically created to work with our QUATRO ink set to produce vibrant, high-quality prints.



VISIT THE M&R QUATRO SITE **BY SCANNING THE QR CODE**

www.mrprint.com/quatro

QUATRO TECHNICAL SPECIFICATIONS			
Print Heads	(4) Epson I3200 A1 Print Heads — (2) CMYK, (2) White	**ENVIRONMENTAL REQUIREMENTS**	
Print Resolution and Speed	320 x 2400 DPI, 4-Pass, 120 Linear Feet/Hour 720 x 1800 DPI, 6-Pass, 90 Linear Feet/Hour 720 x 2400 DPI, 8-Pass, 60 Linear Feet/Hour	**Work Room Temperature**	60° – 80°F (15.6 – 26.7°C)
		Work Room Humidity	40% – 60%
		GENERAL SPECIFICATIONS	
Color Mode	CMYK and White	**Electrical Requirements (Printer and Dryer)[1]**	208/230 V, 1 ph, 34 A, 50/60 Hz, 8 kW
Ink System	White Ink Auto Circulation Supply System	**Printer Dimensions (L x W x H)**	76.2 x 182.88 x 144.78 cm (30" x 72" x 57")
Ink Type	Eco-Friendly Water Based Ink	**Dryer Dimensions (L x W x H)**	187.96 x 109.22 x 106.68 cm (74" x 43" x 42")
Printing Media	M&R QUATRO DTF 24" PET Transfer Film (23.8" W x 328' L)	**Required Minimum Work Space (L x W)**	304.8 x 243.84 cm (10' x 8')
Media Transmission	Automatic Roll Out and Film Take Up	**Recommended Work Space (L x W)**	365.76 x 304.8 cm (12' x 10')
Interface	Computer and Operating Software Included	**Printer Shipping Weight**	788 lb.
Included RIP Software	QUATRO HP RIP - powered by CALDERA	**Dryer Shipping Weight**	1106 lb.

[1] If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly.

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