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MUTOH

Mutoh America, Inc.

Textile and Dye-Sublimation

www.mutoh.com

MUTOH
Smart Printing Equals Value

1.800.99.MUTOH



About Mutoh

- A Global Company
- In Business Since 1952
- In the United States Since 1963
- Leading Manufacturer of Wide-Format Printers and Cutters
- Developer of Smart Printing Technology
- Five Learning Facilities Throughout the United States



Mutoh America, Inc.'s Corporate Office
in Phoenix, Arizona



Dye-Sublimation & Textile Printing

“An opportunity to expand your business and increase profits”



What can be dye-sublimated

- Custom & semi custom uniforms
- T-shirts
- Bathing suits
- Window curtains
- Computer cases
- Mouse pads
- Theater back drops
- Helmets
- Surf boards
- License plates
- Ceramic tiles
- Shower curtains
- Wall paper
- Flags
- Banners
- Retail displays
- Tables
- Fine art reproduction
- Awards
- Murals
- Trade show booths/displays
- Pop-up displays
- Shoes
- Doors
- Fishing lures
- Baseball caps
- Eye glass frames
- Snowboards
- Lanyards
- Glass tiles
- Blankets
- Skies

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Imagine the possibilities...





Advantages of Digital Textile Printing

- **Reduced weight** of printed fabric vs. vinyl = reduced freight costs and more efficient storage.
- **Fabric flexibility** is ideal for complex curves or contoured graphics.
- **Fabric can be steamed** to remove wrinkles after transporting.
- **More elegant** and custom appeal than other print material.
- **Design flexibility** allows custom creations and creativity.
- **No color separation** or costly screens to be produced.
- **Short run job capability** without lengthy set up.



Total Cost of Ownership

Dye-Sublimation

- Greater flexibility over direct to textile printing.
- Inexpensive equipment, 8.5" x 11" desktop printer and small heat press for a low cost of entry.
- Minimal space required.
- High margin potential.
- Low cost, small space, high margin.



Market Opportunity

“An opportunity to expand your business and increase profits”



Textile Printing Market

- Total printed textile market estimated at 27 billion yards/yr globally.
- Anticipated growth is 3% annually.
- Digital printing is estimated to be about 250 million yards / yr. and over 1 billion yards in next three years.
- The US is far behind the other regions of the world in textile print production.
- Ideal time to enter the market for business growth.



Dye-Sublimation Markets

- **The largest market in the US for digital dye-sublimation** is custom sportswear. The next largest is apparel and trade show graphics and displays. New markets with great potential are the flag and banner markets and specialty markets for hard substrates such as ceramics, interior décor and wall coverings.
- **The preferred substrate for dye-sublimation** is polyester (PET).
- **A variety of other plastics and synthetic materials** such as Mylar, PBT and nylon are also suitable for dye-sublimation however polyester gives the best results and overall quality.
- **In order for dye-sublimation to work** on hard materials such as ceramics, metals, glass and wood, a polyester coating or laminate must be applied to the surface prior to the transfer process.
- **Dye-sublimation does not work with** cotton, rayon and other natural fibers. In situations where polyester is blended with other materials such as in 50/50 poly cotton shirts, the color will only dye the polyester fibers, not the cotton part of the blend, resulting in a less saturated image.



Potential New Markets for Digital Printing

- Soft Signage
- Flags / Wind Sails
- Apparel
- Home Furnishing
- Industrial/Architectural
- Personalized Products



Understanding the Options

“Dye Sublimation Transfer vs. Direct, when and why?”



Which Print Method is Best?

Dye-Sub Transfer

Polyester

- Most popular
- Simplest
- Most versatile
- Least expensive

Direct Printing

Natural Fabrics (cotton, silk, nylon)

- Pre-treatment usually required
- Require post processing
- Require special handling systems
- More expensive

Your market opportunity and potential will determine which method, or both, is best for your business.



Transfer vs. Direct Printing

TRANSFER

- Protected by patents
- Low energy dyes only
- Added cost of paper
- Used on a large variety of substrates
- Textiles don't need to be PFP
- Results are usually better
- Heat press is necessary (higher initial cost)

DIRECT

- Not protected by patents
- Low and high energy dyes
- Reduced cost (no paper)
- Used on textiles only
- Media is usually coated (PFP)
- Double sided flags are possible in one pass
- IR heaters or heat press used to cure the dyes
- Shorter learning curve and ease of operation



Ink and Fabric Compatibility

Ink Type	Cotton	Silk	Polyester	Nylon	Wool
Acid Dye Pretreated Fabric		X		X	X
Reactive Dye Pretreated Fabric	X	X			
Dispersed Dye			X		
Pigment Uncoated Natural Fibers	X	X	X	X	X



Perceived Hurdles to Entry

CONCERN

High cost of entry

Learning curve

Finishing

REALITY

Higher margins available.

Dye-sub actually has low initial cost of entry.

Less competitive / less commoditized.

Transportation, handling and overall management of fabric costs less .

Lack of education on techniques and process.

Conclusion:

Textile and dye-sublimation offers print shops an opportunity to grow their market share, increase profits, stand out from the competition and stay competitive.



Selling Dye-Sublimation & Textile Solutions

“Simple selling and profit models”



Sales Process

1. Identify the market opportunity.
2. Select the appropriate printer for the job.
3. Choose fabric.
4. Pair with appropriate ink type.

EXAMPLE: Soft signage.

- Best solution is polyester.
- Ink types available: dispersed dye and pigment.
- Dispersed = more vibrant colors and most popular.
- Pigment = superior light fastness.



Calculating Machine Profit

1. Determine sales revenue based on a price per yard.
2. Estimate costs for a yard of fabric, paper, ink and labor per hour.

EXAMPLE:

Printer production	10 yards/hour
Cost (labor, ink, fabric)	\$10/yard
Selling price	\$20/yard
Profit per machine	\$100



Mutoh ValueJet

“Affordable, high performance printers that incorporate Smart Printing technology to deliver best-in-class dye-sublimation and textile solutions”

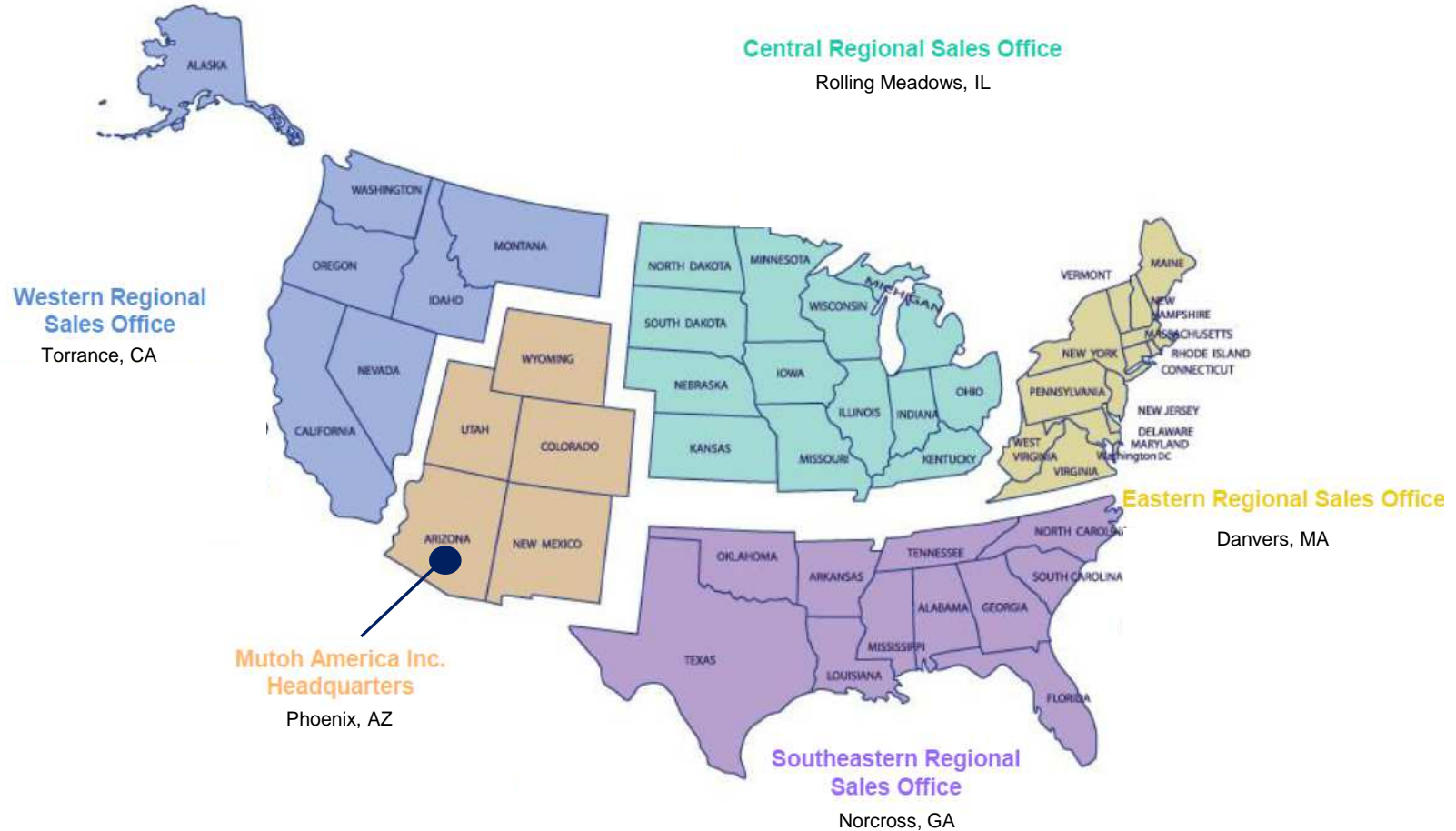


The Mutoh Advantage

- **High production, cost effective** easy to operate printer solutions to satisfy entry level and high output demands.
- **Open ink platform** for cost savings and more flexibility with print shop requirements.
- **Open RIP software solutions** that best fit the customer's needs and expectations.
- **EPP partners** to guide and support customers through the market for proven results.
- **Five learning centers** throughout the US for hands on demonstrations and application education.
- **Relationships** with media, ink and heat press manufacturers to provide optimized print solutions for all levels of production.



Mutoh America, Inc. Learning Centers





Mutoh Textile & Dye-Sublimation Printers



ValueJet 1628TD
64" Textile
\$29,995



ValueJet 2628TD
104" Textile
\$49,995



ValueJet 1624W
64" Dye-Sub
\$18,995



ValueJet 1638W
64" Dye-Sub
\$27,995

ValueJet 2638W

104" Dye-Sub
\$49,995

Also available for sublimation
applications

Prices subject to change. Call to confirm



Mutoh Water-Based Printers



RJ-900X
42" Water-Based
Aqueous, Pigment
& Dye Ink Types
\$7,561

Prices subject to change. Call to confirm



Mutoh ValueJet Printer Line-Up

“Smart Printing Equals Value”



ValueJet 1624W

\$18,995 msrp.

- Ideal for short run sampling and even larger production output using multiple machines.
- Cost effective entry level printer for dye-sublimation transfer applications.



Printer Setting

360 x 540 3 pass bi-di
720 x 720 4 pass bi-di
720 x 360 2 pass bi-di

Wave

Fog 2
Fog 2
Fog 2

Speed

268sf/hr
204sf/hr
399sf/hr

**Replacement
Head Price**
\$2,305

Prices subject to change. Call to confirm



ValueJet 1638W

\$27,995 msrp.

- Ideal for short run sampling and even larger production output using multiple machines.
- Staggered head design increases the production volume vs. other single head competitive machines.



Printer Setting

360 x 540 3 pass bi-di
360 x 720 2 pass bi-di

Wave

Fuzz 2
Fuzz 2

Speed

330sf/hr
490sf/hr

Replacement Head Price

\$2,305

Prices subject to change. Call to confirm



ValueJet 1628TD / 2628TD

\$29,995 / \$49,995 msrp.

- Textile printers ideal for printing soft signage.
- Print direct to fabric or on transfer paper for dye-sublimation heat transfer.
- Run two types of ink simultaneously, CMYK x 2 or eight colors.
- Use dye transfer sublimation ink, direct print sublimation ink or water based modified pigment inks.



Speed and Resolution

Maximum print speed / resolution

Maximum resolution

447 sqft/hr 360/360dpi (CMYK x 2)

720 dpi

Prices subject to change. Call to confirm



RJ-900X

\$7,561 msrp.

- Small footprint for easy integration into any size shop.
- Simple operation and fast operator learning curve.
- Improved paper handling with pressure roller control feature.
- Cost effective entry level printer for dye-sublimation transfer applications.



Speed and Resolution

Maximum print speed / resolution

676 sqft/hr 360/360dpi (Draft mode)

Maximum resolution

2880 dpi

Prices subject to change. Call to confirm



Mutoh Reseller Partnerships

*“Building strong relationships with market leaders
to help you grow your business”*



Mutoh's Extended Partner Program (EPP)



Mutoh has partnerships with the leading resellers in the textile and dye-sublimation market. Through these reseller partnerships customers are able to source the most competitive and appropriate print solutions and receive the highest level of support from the most experienced leaders in is field.



Mutoh's Extended Partner Program (EPP)

For complete details on the Textile / Dye-Sublimation Extended Partner Program visit this link: <http://www.mutoh.com/EPP.php>

- Program documents
- Spec sheets
- Dealer locator
- Brochures
- Images
- Solutions





Contact your Mutoh sales representative or authorized Mutoh reseller for additional information.

To schedule a demonstration go to
http://mutoh.com/demo_request.php

To locate a dealer near you visit www.mutoh.com



Product specifications and pricing are subject to change.
Contact your Mutoh sales rep or authorized Mutoh reseller.

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