

# DICEtrax Single-Pass Conveyor Press



**DICE**<sup>™</sup>

## Product Overview

The DICEtrax conveyor printer is a high performance, wide format, flexible digital inkjet printing system for a wide variety of substrates and applications. Here is what makes the DICEtrax printer so unique:

**High Speed** The DICEtrax is a single pass printer, using a fixed array of printheads that span the print width area. The array of printheads is positioned over the substrate while it passes under the array which jets and cures the UV ink. Unlike a scanning printer that moves the printheads across the substrate, the single pass process is amazingly fast. The standard 25 inch wide CMYK system, running at 100 linear feet/minute, is capable of imaging more than 10,000 square feet per hour.

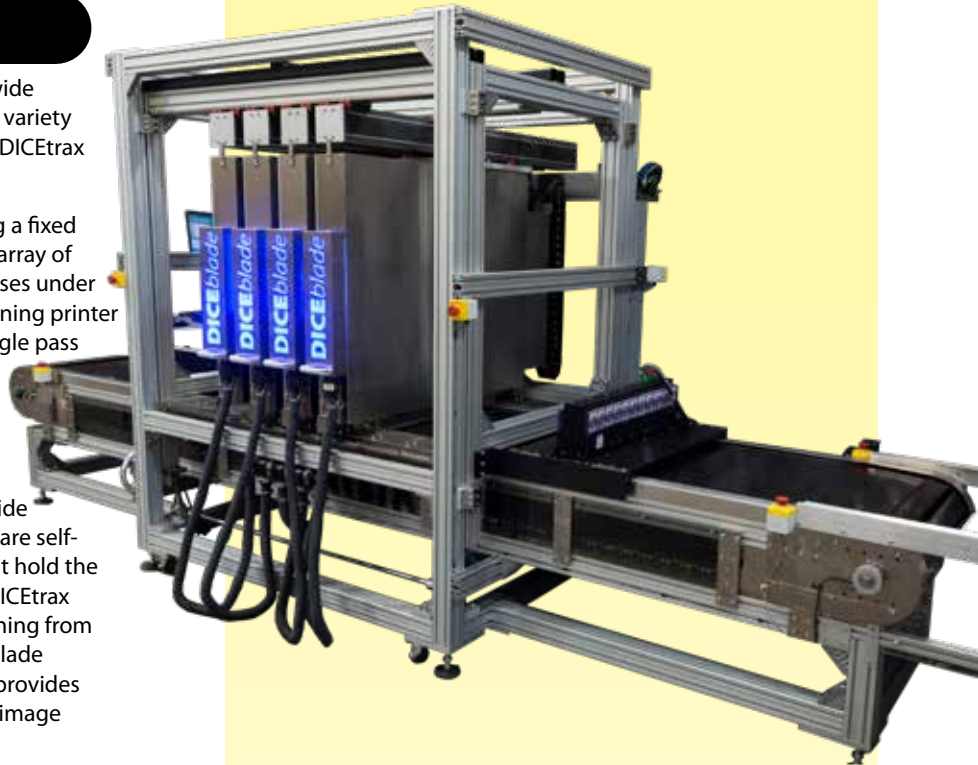
**Wide Print Image** The DICEtrax is engineered to provide significantly wider imaging widths. The DICEblades are self-contained modular one-color printing sub-systems that hold the printhead array, ink supply and drive electronics. The DICEtrax can be built to match the print width required for anything from narrow signs to wide corrugated packaging. The DICEblade printbar system, regardless of width (up to 78 inches), provides accurate and consistent drop placement for high print image quality.

**Precise Material Handling** High quality print images require that the substrate passing under the printheads is moved consistently and accurately. The DICEtrax printer uses a precision segmented conveyor system. Each segment has a vacuum chamber that holds material in place as it moves under the printheads. The result is accurate drop placement and consistent color registration for exceptional print quality.

The DICEtrax is not material dependent. It can print on plastics, metal, wood, paper- rigid or flexible cut sheets of material. The distance between the material surface and printhead is easily adjustable to accommodate different thicknesses. Images can also print edge to edge as there is no 'gripper edge' needed.

**Digital Flexibility** The DICEtrax provides all the advantages of digital printing such as: eliminating setups making short runs economical and changing the image from print to print allows for personalization, serialization or customization. The DICEtrax includes a robust and flexible RIP engine for variable data throughput and color management advantages.

As each digital print can be a custom image, the DICEtrax can also handle unique format sizes print to print. Rather than printing a batch of common size sheets (it can certainly do that) if the print

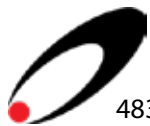


**DICEtrax** (Shown in 4 color configuration with room for 8 colors)

queue is loaded with a different image sizes and the material input is sequenced to match the print queue, the result is "print to order" rather than "make to print".

**Configuration Flexibility** The DICEtrax is capable of printing on a variety of materials. It also can be configured to meet the requirements of a variety of applications. The DICEblade system is the key. Because each DICEblade module is an ink color, additional DICEblades can be added to a printer. Printing on colored substrate that needs a white base coat? A white DICEblade in front of CMYK blades can do that. Need a clear topcoat embellishment after printing? A clear DICEblade behind the colors can be added. Need a larger color gamut-extended gamut (OGV) DICEblades can be added.

The DICEblade systems can be configured with different printheads to provide high resolution detail or thick white base coats. Configuring resolution and drop sizes improves print speeds and ink film thickness as needed. DICEblades are also designed to run a variety of inks including UV curable, aqueous, solvent inks and functional fluids. Inter-color pinning lamps control wet ink properties to insure consistent and even color appearance.



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**Maximizing Uptime** The DICEtrax system has a number of features to accomplish maximum uptime. First, ink is circulated and filtered through the ink supply and the printheads continuously. This ensures the ink at nozzles is fresh and ready to jet. Second, each DICEblade system includes a printhead tending system that vacuums the printheads. This eliminates the need to manually wipe the printheads to clean them. Third, in the event that service is needed, the DICEblades can be pulled out to a service position that allows full access to all components; reducing the time needed to access, diagnose and replace components if necessary. Maintenance contracts are optional, not required.

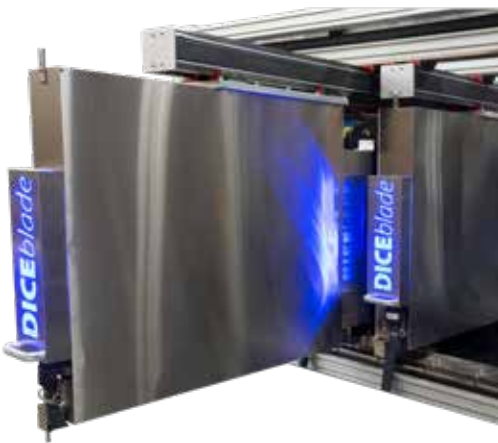
The DICEtrax has features that keep the machine producing. A bulk ink system uses 5 liter cubes of ink to fill the ink supply inside the DICEblade. The DICEblade ink supply monitors ink levels and

will automatically replenish from the bulk ink system while in production. The ink supply is also self-regulating, maintaining proper temperature, vacuum and pressure levels for consistent operation. Operators can see if any aspect of the printer is out of operating range or not ready for production. The operator also has access to a print queue that allows them to sequence jobs to the printer, monitor the progress of jobs as they print and pause, restart or change print quantities.

**Options** The DICEtrax provides the core functionality for printing, optional material handling systems, such as feeders or stackers, can be integrated into the system for greater productivity. Prototype & Production Systems, Inc. has a long history integrating productive options into the DICE family of printing systems. Talk to us about your application to explore these optional possibilities.



*DICEtrax precision segmented conveyor*



*DICEblade Print Module pulled out for maintenance*

Parameter	DICEtrax
Imaging Width <sup>1</sup>	25 in (635mm) standard, customized up to 78 in (2m)
Print Speeds <sup>2</sup>	100 fpm linear (30 mpm), depending on printhead/ configuration
Print Resolution <sup>2</sup>	360 dpi up to 1200 dpi, depending on printhead
Printheads	FujiDimatix: Samba, Starfire, Ricoh: Gen5, Xaar: 1003, 2002, Kyocera: KJ4, Konica Minolta: 1800i
Jetting Fluids	UV cure, aqueous, solvent, functional fluids, custom formulation
Substrates	flexible or rigid plastics, metal, paper, corrugated, parts, etc.
Substrate Thickness	Up to 4 inches (10cm)
UV Cure	LED intercolor pinning lamps, LED final cure
Computer / Software	Windows OS PC w/PPSI print manager, ColorGate or Harlequin RIP engine
Drive Electronics / Software	Meteor
Dimensions	LxWxH 225"x72"x94" (572x182x239 cm) standard configuration
Power <sup>3</sup>	85-240VAC, single phase, 50-60Hz 200 amps
Auxiliary Connections	Air: 90-100psi @ 2CFM Internet connection for remote support access

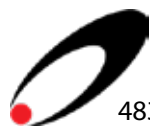
<sup>1</sup> Standard sizes listed. Larger widths available in custom orders

<sup>2</sup> Depends upon printhead type

<sup>3</sup> Amperage will vary with print width

## Watch It Go

See a video of the DICEtrax operating. Scan the QR code:



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