



Discovery

In-line Multi-Color UV Print/Cure System

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Discovery®

With its 44" x 64" (112 x 163 cm) maximum image size, M&R's Discovery Multi-Color Inline UV Print/Cure System bridges the size gap between M&R's Advantage and Processor Series inline presses. Discovery offers impressive features like electronically controlled central off-contact, carriage high-lift settings that allow users to unload screens while leaving squeegees and floodbars in the machine, reducing setup and teardown times, and optional dripless squeegee attachments that automatically flip to the opposite direction against the front of the floodbar before the flood stroke begins, preventing ink from dripping into the image. Discovery also features flat flood capability, an electronically adjustable ink retrieval system, and a digital microprocessor with self-diagnostics. An above-table double-sided sheet locator allows the operator to load from any corner for double-sided work, and a moveable load table simplifies the loading of smaller substrates. Discovery's park position allows floodbars and squeegees to be raised and moved to the front or rear without flooding or printing, and allows easy squeegee and floodbar installation and removal. Squeegee pressure equalizer regulators ensure uniform squeegee pressure. Discovery's jog left/right feature allows the press to index in either direction. This allows the operator to alter the order of screen/color application on test prints without having to tear down and set up for each variation.

M&R's patented vacuum system holds substrates securely to a single moving table throughout the print/cure process; together with M&R's precise inline indexing table, it maintains exceptional substrate registration throughout the print/cure cycles. Adjustable blowback at the unload station aids operators in unloading stock. An optional takeoff system further improves productivity. Optional features include M&R's Zoned Vacuum System™, which ends the need for tape by allowing operators to quickly and easily limit vacuum to the area under the substrate.

Discovery's cure system features standard 300-watt lamps. Cure options include a 400-watt system and M&R's Switchback Cure System, infinitely adjustable from 160 to 400 watts. Switchback accepts three types of UV lamps: Mercury Vapor, Ferric (Iron) Oxide, and Gallium, allowing operators to select the optimal curing source and intensity for even the most difficult ink/substrate combinations.

Discovery. The right size. The right price. The right press. Discover it now at M&R.

www.nuarc.co.kr

Discovery

In-line Multi-Color UV Print/Cure System



Standard Features

Central Off-Contact

- Changes all printhead off-contacts within seconds
- Electronically controlled from the main panel
- Offers greater control over print quality
- Servo driven

Certification

- Panel meets Canadian Standards Association (CSA) standards and carries the CSA label
- Panel meets Underwriters Laboratories® (UL) standards and carries the UL label

Color Capacity

- 1-8 colors (4 colors standard)

Control Center

- Control panel offers easy navigation, with programming and prompts in plain language
- Digital keypad with alphanumeric display
- Digital microprocessor with self-diagnostics
- Dwell and load station vacuum times are independently managed from the control panel
- Foot pedal pauses machine cycle, releases vacuum at load table, and keeps paper locators firmly against vacuum bed
- Jog left/right allows the press to index in either direction so that during proofing the operator can alter the order of screen/color application on test prints without having to tear down and set up for each variation
- Production speed monitor for more accurate job costing

Cure System

- 300-watt UV Cure System with settings of 125, 200, 250, & 300 watts per linear inch
- Delivers optimal cure to heat-sensitive and heat-resistant stock
- Digital elapsed time meter monitors lamp life
- Dual UV lamps are individually controlled

Design & Construction

- Automatic oiler for chains and rails
- Constructed of rigid steel & aluminum and premium components
- Control panel is track-mounted, allowing it to be positioned anywhere along the front of the load station
- Design provides superb operator access
- Easy-access housing makes maintenance and lamp changing simple
- Printheads maintain machine registration with four-post locking

Index System

- Servo-driven index ensures accurate, smooth travel

Ink Dip System

- Electronically adjustable ink retrieval system keeps ink in the print area (U.S. Patent No. 5,649,479)

Maximum Image Area

- 44" x 64" (112 x 163 cm)

Load Station

- Above-table double-sided sheet locator allows operator to load from any corner for double-sided work
- Adjustable vacuum and blowback
- Moveable load table simplifies the loading of smaller substrates

Off-Contact

- Four-corner off-contact settings allow quick and accurate screen leveling
- Tool-free off-contact adjustment
- Zero off-contact capability offers greater control over print quality

Peel System

- Automatically synchronized gear-driven peel
- Flat flood capability
- Infinitely adjustable within range

Print Carriage

- Adjustable, tool-free front and rear sensors located on the printhead
- Carriage high-lift setting allows users to unload screens while leaving squeegees and floodbars in the machine, reducing setup and teardown times
- Dynamic braking prevents the print carriage from drifting into the printing area
- Hardened steel tracks provide years of smooth, vibration-free printing
- Heavy-duty design
- Independent drives for print carriage and head lift

Registration

- Inline indexing table maintains excellent registration throughout printing and curing cycles
- Master frame with micro-register adjustments and visual guides allow quick and easy setup

Screen Clamps & Holders

- Adjustable screen holders
- Front screen loading makes fast screen changes possible
- Pneumatic screen clamps facilitate rapid screen loading and deliver excellent stability on a wide variety of screens

Squeegee/Floodbar

- Calibrated independent and micro-adjustable pressure settings
- Park position allows floodbar and squeegee to be raised and moved to the front or rear without flooding or printing, and allows easy squeegee and floodbar installation and removal
- Pneumatic squeegee/floodbar locks
- Squeegee and floodbar traverse speeds can be set individually
- Squeegee pressure equalizer regulator ensures uniform squeegee pressure
- Tool-free pressure and angle adjustments are independently set for superior print quality

Options & Accessories

Certification

- CE Compliant: Built to specifications established by the European Committee for Standardization® (CE)

Control Center

- Modem with cable and module enable remote diagnosis by M&R Technical Support
- MPR (Management Production Reporting) Software System™ provides press status and production data in real time, giving facility managers the information they need to maximize efficiency

Cure System

- 400-watt UV Cure System with settings of 125, 200, 300, & 400 watts per linear inch
- Infrared panel for heat transfer substrates
- Switchback™ UV Cure option is infinitely adjustable from 160 to 400 watts per linear inch, and accepts three types of UV lamps (Ferric (Iron) Oxide, Gallium, & Mercury Vapor), allowing operators to select the optimal curing source and intensity for even the most difficult ink/substrate combinations

Squeegee/Floodbar

- Dripless squeegee attachment automatically flips to the opposite direction against the front of the floodbar before the flood stroke begins, preventing ink from dripping into the image area

Takeoff System

- Automatic takeoff

Vacuum System

- Zoned vacuum beds end the need for tape by allowing operators to limit vacuum to the area under the substrate

Vacuum System

- Adjustable blowback aids operator in unloading stock
- CNC-drilled 1 2/3" (4.22 cm) thick heavy-gauge anodized aluminum vacuum bed
- High-volume vacuum turbine system easily adjusts to different stock type and thickness
- Self-contained vacuum system
- Vacuum and blowback are each independent and adjustable
- Vacuum track holds substrates securely during print and high-speed transport operations

Service

- 24-hour hotline

Training

- Access to M&R's Training Center

Warranty

- One-year limited

SPECIFICATIONS

Model	Print Stations	Maximum Image	Maximum Frame Size	Overall Size	UV Lamps	Length of Additional Print/Cure Stations	Additional Colors Available	Air @ 100 PSI	Electrical Requirements*
Discovery 4464	4 Color	44" x 64" (112 x 163 cm)	64" x 90" (163 x 228 cm)	60' x 8' x 57" (1829 x 244 x 145 cm)	8	10' (305 cm)	4	40 cfm	358 amps***

*If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly. Other electrical configurations are available; contact M&R for details

Each additional print station adds 8 cfm * Add 84 amps for each additional color

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