

i-Image™ STE, STE I & STE II



CTS Imaging/Exposure Systems

FEATURES

- Three-printhead models can generate and expose full-size images in less than a minute
- i-Image STE exposes emulsion with a scanning UV LED light source on the outward pass
- i-Image STE II exposes emulsion with a secondary UV LED light source following the inward pass, with a scanning UV LED light source on the outward pass—or with both light sources in the same imaging/exposure cycle
- i-Image STE I exposes emulsion with the full-size secondary light source found on i-Image STE II
- The high density of M&R's UV LEDs ensures the quickest exposures and the most uniform coverage available



Patents Pending

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i-Image™ STE, STE I & STE II

OVERVIEW

i-Image STE Computer-to-Screen (CTS) Imaging System

M&R's *i-Image STE* is the world's first all-in-one computer-to-screen (CTS) imaging and UV LED exposure system (US Patent Pending, European Patent Application No. 14721111.4). By combining CTS imaging and UV LED screen exposure in one machine, M&R has dramatically reduced the time and effort required to prepare images for screen printing. On the inward pass, *i-Image STE* uses specially-formulated water-based UV-blocking ink and advanced high-resolution CTS inkjet printer technology to quickly generate opaque images on emulsion-coated screens. On the outward pass, the built-in high-output scanning UV LED light source exposes the emulsion, producing screens that can be taken directly to washout. CTS images are superior to traditional film positives, delivering greater detail and smoother halftone transitions. *i-Image STE* eliminates the need for costly film positives, as well as the space and labor required to store and retrieve them. Because the image information is digital, it's easy to store and quick to retrieve.



The touchscreen control panel includes Job Recall™, which enables users to store exposure settings for specific emulsions and quickly recall them later

i-Image STE's onboard UV LED exposure system streamlines workflow and increases productivity, delivering fast, superior exposures with exponentially lower energy costs. Not only do UV LEDs use far less energy, they're only on during the exposure process. M&R's UV LEDs run cooler, save energy costs, reduce screen exposure time, and speed up production. And, unlike expensive metal-halide bulbs that require replacement every year or two, *i-Image STE*'s UV LED light source can last for decades. In fact, M&R is so confident in the longevity of *i-Image* screen-exposure LEDs that it backs them with a limited lifetime warranty against failure in normal use. The *i-Image STE* computer-to-screen imaging & exposure system includes computer, monitor, and M&R's proprietary software. By providing complete control of print and exposure parameters, the software ensures high-quality screen images at production-level speed. It provides full image scaling and positioning, has 16-exposure presets for common applications, and can be user-customized for specific art types, various mesh counts, and types of emulsion. And the high density of M&R's UV LEDs ensures the quickest exposures and the most uniform coverage available.

i-Image STE is available in two sizes and three printhead configurations. *i-Image STE 36* models process image areas up to 51 x 58 cm (20" x 23") and accept most screen frames up to 66 x 91 cm (26" x 36"). *i-Image STE 43* models process image areas up



The *i-Image*'s industrial printheads provide easy access for cleaning and maintenance

to 51 x 76 cm (20" x 30") and accept most screen frames in sizes up to 66 x 109 cm (26" x 43"). Both *i-Image STE 36* and *i-Image STE 43* are available with one, two, or three industrial printheads. One-printhead models can image and expose up to 150 screens per 8-hour shift; two-printhead models can image and expose up to 300 screens per shift; and three-printhead models can image and expose up to 400 screens per shift. In fact, three-printhead models can generate and expose full-size images in less than a minute (Note: some dual-cure and other slower-exposing emulsions may extend the time required for the outward pass). All *i-Image STE* units are designed to fit through an 81 cm (32") doorway. M&R's *i-Image STE* all-in-one computer-to-screen (CTS) imaging and UV LED exposure system will revolutionize your screen room. Once you've experienced M&R's *i-Image STE*, you won't be satisfied with anything less.



i-Image STE II adds a secondary light source after the inward pass that dramatically accelerates the exposure of dual-cure and other slow-exposing emulsions

i-Image STE II Computer-to-Screen (CTS) Imaging System

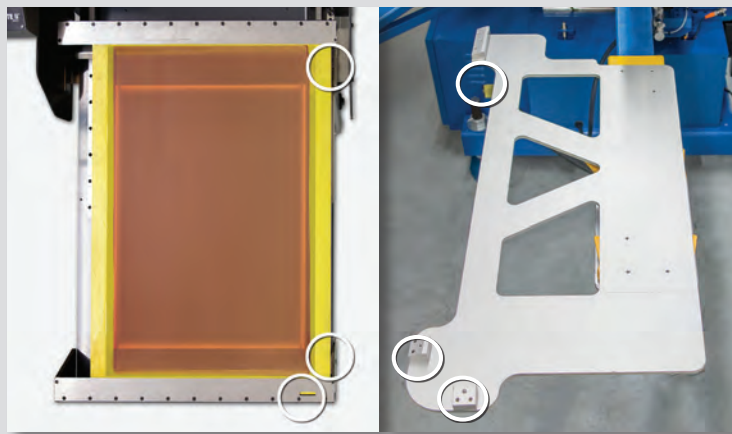
i-Image STE II has all the imaging and exposure features and capabilities of *i-Image STE* but adds a secondary UV LED light source after the inward pass for ultra-fast exposures (US Patent Pending, European Patent Application No. 14721111.4). The secondary light source dramatically accelerates the exposure of dual-cure and other slower-exposing emulsions. *i-Image STE II* can be used with either exposure method, with both exposure methods in the same imaging/exposure cycle, or without exposure.

i-Image STE I Computer-to-Screen (CTS) Imaging-Exposure System

i-Image STE I is for screen printers who don't require the scanning exposure capability found on *i-Image STE* or the dual-exposure capability found on *i-Image STE II*. *i-Image STE I* dispenses with the scanning UV LED light source in favor of the full-size secondary light source found on *i-Image STE II*.

Tri-Loc for CTS (Computer-to-Screen) Imaging Systems

Since every CTS-generated screen is automatically pre-registered for M&R's Tri-Loc registration system, on-press registration is blazingly fast. In fact, owners report imaging and exposing screens in as little as 40 seconds—and washed out and registered on the press with Tri-Loc in less than 8 minutes! Users simply mount the Tri-Loc pallet to the press and move it to each printhead, pulling the screen frames into contact with the pallet at the three registration points. It's an amazingly easy process.



Registration points on *i-Image STE, STE I & STE II* precisely match the stop points on Tri-Loc pallets for blazingly fast registration

STANDARD FEATURES

CERTIFICATION

- CE Certified: Built to specifications established by the European Committee for Standardization® (CE)
- UL Listed: Built to specifications established by Underwriters Laboratories® (UL)

COMPUTER-TO-SCREEN IMAGING

- Can be user-customized for specific art types, various mesh counts, and types of emulsion
- Digital workflow simplifies the imaging process
- Eliminates the need for costly film
- Improves image quality
- Produces exceptional screen-to-screen registration
- Promotes faster on-press setup and registration
- Provides complete control of print parameters
- Provides full image scaling and positioning
- Reduces processing steps
- Three-printhead models can generate and expose full-size images in less than a minute
- Virtually eliminates pinhole touchup
- Workflow can be customized for specific customer needs

DESIGN & CONSTRUCTION

- Designed to fit through an 81 cm (32") doorway
- Includes computer, monitor, and M&R's proprietary software
- Self-contained design speeds production by allowing placement in light-safe screen-coating rooms
- Ships fully assembled and ready to deploy
- Touchscreen panel with alphanumeric display

LIGHT SOURCE FOR SCREEN EXPOSURES

- Combines CTS imaging and UV LED screen exposure in one machine
- Dramatically reduces exposure time
- Eliminates the need for a separate screen exposure unit
- i-Image STE exposes emulsion with a scanning UV LED light source on the outward pass
- i-Image STE I exposes emulsion with the full-size secondary light source found on i-Image STE II
- i-Image STE II exposes emulsion with a secondary UV LED light source following the inward pass, with a scanning UV LED light source on the outward pass—or with both light sources in the same imaging/exposure cycle

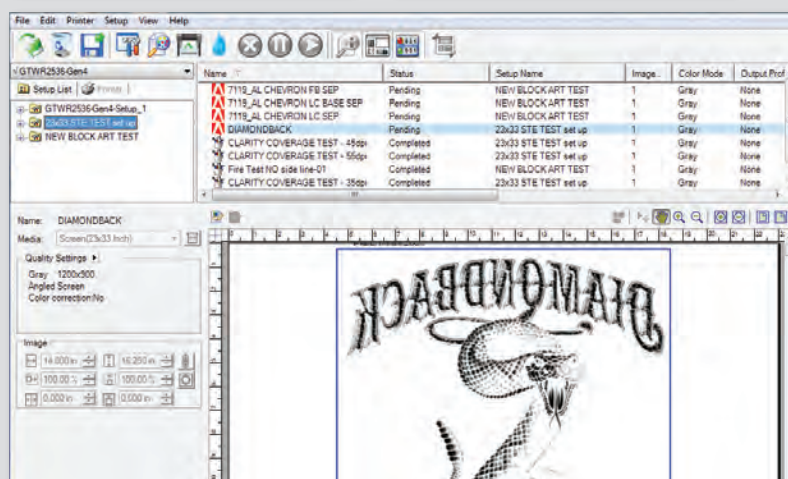
- Job Recall™ allows storage and recall of numerous screen exposure values
- The high density of M&R's UV LEDs ensures the quickest exposures and the most uniform coverage available
- UV LEDs use far less energy than metal halide lamps and are only on during the screen exposure process

WARRANTY, SERVICE AND SUPPORT

- 24-hour hotline is staffed 365 days a year
- Access to M&R's Training Center
- M&R OEM parts—including genuine M&R pallets & platens—and screen printing supplies are available online at store.mrprint.com
- One-year limited warranty
- The screen-exposure LEDs used in this equipment carry a limited lifetime warranty against failure in normal use



Easy adjustment of artwork layout and numerous print parameters



Powerful RIP software provides full image scaling and positioning, presets for common applications, and can be user-customized for specific art types and various mesh counts

SPECIFICATIONS

	i-Image STE, STE I & STE II 36-1	i-Image STE, STE I & STE II 36-2	i-Image STE, STE I & STE II 36-3	i-Image STE, STE I & STE II 43-1	i-Image STE, STE I & STE II 43-2	i-Image STE, STE I & STE II 43-3
Electrical Requirements (STE I) ^{1, 2, 3}	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW	208/230 V, 1 ph, 9.1 A, 50/60 Hz, 2.1 kW
Electrical Requirements (STE II) ^{1, 2, 3}	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW	208/230 V, 1 ph, 10.5 A, 50/60 Hz, 2.4 kW
Electrical Requirements (STE) ^{1, 2, 3}	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW	208/230 V, 1 ph, 7 A, 50/60 Hz, 1.6 kW
Industrial Printheads	1	2	3	1	2	3
Maximum Image Area ⁴	51 x 58 cm (20" x 23")	51 x 58 cm (20" x 23")	51 x 58 cm (20" x 23")	51 x 76 cm (20" x 30")	51 x 76 cm (20" x 30")	51 x 76 cm (20" x 30")
Maximum Screen Frame Profile	4.1 x 4.1 cm (1.63" x 1.63")	4.1 x 4.1 cm (1.63" x 1.63")	4.1 x 4.1 cm (1.63" x 1.63")	4.1 x 4.1 cm (1.63" x 1.63")	4.1 x 4.1 cm (1.63" x 1.63")	4.1 x 4.1 cm (1.63" x 1.63")
Maximum Screen Frame Size	66 x 91 cm (26" x 36")	66 x 91 cm (26" x 36")	66 x 91 cm (26" x 36")	66 x 109 cm (26" x 43")	66 x 109 cm (26" x 43")	66 x 109 cm (26" x 43")
Minimum Screen Frame Size	30 x 46 cm (12" x 18")	30 x 46 cm (12" x 18")	30 x 46 cm (12" x 18")	30 x 46 cm (12" x 18")	30 x 46 cm (12" x 18")	30 x 46 cm (12" x 18")
Overall Size (H x W x D) (STE)	125 x 142 x 213 cm (49" x 56" x 84")	125 x 142 x 213 cm (49" x 56" x 84")	125 x 142 x 213 cm (49" x 56" x 84")	125 x 142 x 254 cm (49" x 56" x 100")	125 x 142 x 254 cm (49" x 56" x 100")	125 x 142 x 254 cm (49" x 56" x 100")
Overall Size (H x W x D) (STE I & II)	125 x 142 x 254 cm (49" x 56" x 100")	125 x 142 x 254 cm (49" x 56" x 100")	125 x 142 x 254 cm (49" x 56" x 100")	125 x 142 x 287 cm (49" x 56" x 113")	125 x 142 x 287 cm (49" x 56" x 113")	125 x 142 x 287 cm (49" x 56" x 113")
Screens per Shift ⁵	150	250	350	150	250	350
Shipping Weight (STE)	612 kg (1350 lb)	612 kg (1350 lb)	612 kg (1350 lb)	635 kg (1400 lb)	635 kg (1400 lb)	635 kg (1400 lb)
Shipping Weight (STE I & II)	635 kg (1400 lb)	635 kg (1400 lb)	635 kg (1400 lb)	658 kg (1450 lb)	658 kg (1450 lb)	658 kg (1450 lb)

¹ If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly. Other electrical configurations are available. Contact The M&R Companies for details.

² An uninterruptible power supply (UPS) should be used to protect electrical components

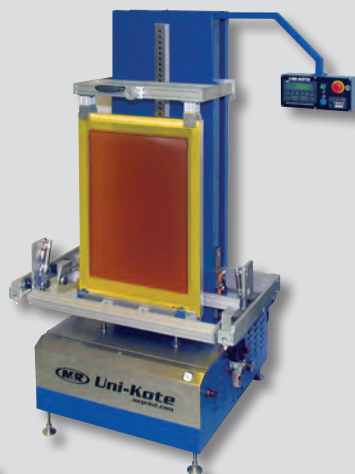
³ 110 V electrical configuration is optionally available

⁴ When printed on a 66 x 91 cm (26" x 36") screen frame on i-Image STE & STE II 36 models or when printed on a 66 x 109 cm (26" x 43") screen frame on i-Image STE & STE II 43 models

⁵ Approximate number of screens the model is capable of printing in an 8-hour shift. Figures do not include exposure time, which may vary according to emulsion type and thickness.



THE DIGITAL SCREEN ROOM



Fast, high-quality screen printing starts with high-quality screens, and M&R's Digital Screen Room concept is dedicated to dramatically reducing screen-production time while making substantial improvements to image quality and consistency.

1 Coat Screens with Uni-Kote Automatic Screen Coating Machine

Uni-Kote provides a reliable, low-cost option for automating screen coating. The computerized control center, conveniently mounted at the side of the screen coating machine, makes programming simple. Uni-Kote's front and rear screen coaters can apply emulsion in tandem or independently.



2 Image and Expose Screens with i-Image STE, STE I & STE II Computer-to-Screen Imaging & Exposure Systems

i-Image STE, STE I & STE II quickly generate images on the inward pass. i-Image STE exposes emulsion with a scanning UV LED light source on the outward pass. i-Image STE II exposes emulsion with a secondary UV LED light source following the inward pass, with a scanning UV LED light source on the outward pass—or by with both light sources in the same imaging/exposure cycle. i-Image STE I exposes emulsion with the full-size secondary light source found on i-Image STE II. This combination of imaging and exposure in one machine dramatically reduces the time and effort required to prepare images for screen printing.



3 Rinse Exposed Screens with Eco-Rinse Automatic Screen Rinsing System

M&R's Eco-Rinse automates the tedious process of rinsing exposed screens while ensuring consistency and reducing the chance of unintentionally blowing out exposed images. Manually-processed screens often require follow-up rinsing because of incomplete or inadequate processing due to operator fatigue, boredom, or inadequate training. Processing can also vary from one operator to the next. Those problems are eliminated with the consistent screen rinsing available with the Eco-Rinse automatic screen rinsing system.

4 Register Exposed Screens with Tri-LOC Rapid Screen Registration System

Since every CTS-generated screen is automatically pre-registered for M&R's Tri-Loc registration system, on-press registration is blazingly fast. Users simply mount the Tri-Loc pallet to the press and move it to each printhead, pulling the screen frames into contact with the pallet at the three registration points.



The M&R Companies
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