



# JETVARNISH 3D Evolution & iFOIL

DIGITAL 2D/3D SPOT UV COATER WITH INLINE HOT FOILING



# JETVARNISH 3D EVOLUTION & IFOIL L — DELIVERING DYNAMIC PERFORMANCE FOR THE MOST DEMANDING APPLICATIONS.

If you are looking into differentiating and upgrading your services, the MGI JETvarnish 3D Evolution is the ideal solution for digital and offset print providers. Turn plain printed jobs into remarkable and appealing prints by spot coating digital and offset prints, highlighting defined areas or adding tactile 3D effects with our digital spot UV coating device MGI JETvarnish 3D Evolution. And by combining it with the inline hot-foiling module, you'll achieve an even more glamorous finish.

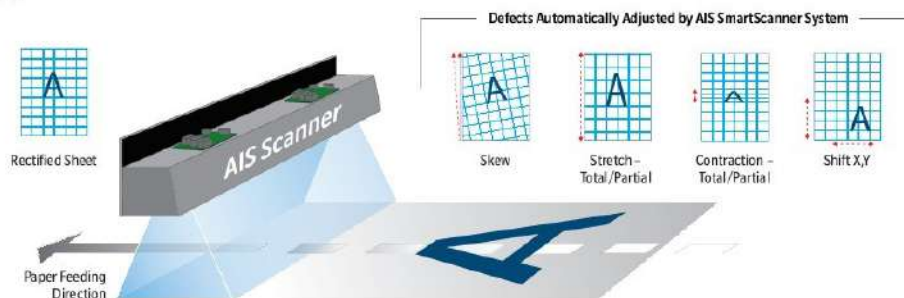
## ARTIFICIAL INTELLIGENCE SMARTSCANNER (AIS)

The MGI AIS system is a revolutionary registration development for the printing and finishing industry:

- Eliminates over 80% of operator setup time spent on registration processes
- Allows quick and seamless integration within job workflows with a "scan and register" setup process
- Supports rapid equipment amortization with increased throughput, faster job completion and greater productivity
- Removes unnecessary operator wage costs and paper make-ready waste

The patented AIS system uses Artificial Intelligence to create an automatic varnish and hot foil registration for inkjet heads over the preprinted sheet. It's fully compatible with Variable Data Finishing (VDF) jobs. Using print image and inkjet synchronization algorithms, the AIS system runs at more than 5 billion operations per second. Without operator intervention or a decrease in feeding speed, it makes corrections and adjustments for any defects generated by the original offset or digital printing run and lamination process. For example:

- Sheet and image skew
- Sheet and image stretch – partial or total
- Sheet and image contraction – partial or total
- Sheet and image shift on X and/or Y direction



## SOFTWARE SUITE AND TOUCHSCREEN INTERFACE



### OVERSEE IT ALL

Developed by MGI, the highly innovative JETvarnish 3D Evo software suite includes management tools that operate via an intuitive touchscreen interface. Job cost calculator. Workstation image editor. AIS SmartScanner setup. And more. You'll be able to manage all operations related to production and maintenance.



### JOB COST CALCULATOR

Based on your job's image file, this powerful calculator forecasts varnish consumption costs down to the penny, and automatically calculates precise production costs prior to actual production. It's a valuable tool for managing supply costs and making accurate job estimates. Also available on a PC for your pricing and sales departments.



### SPOT VARNISH EDITOR

This easy-to-use graphical tool was designed by MGI for editing job files at the workstation. It allows your production operators to quickly modify enhancements without going back to pre-press. It saves time and allows operators to set up jobs in minutes, conducting rapid prototyping directly from the equipment workstation. Varnish and foil enhancements are designed for high production work environments.



## MORE FEATURES FOR MORE PRODUCTIVITY

Since developing the first Inkjet Spot UV Coater in 2008, MGI has installed more Digital Spot UV Coaters than anyone else in the industry. The JETvarnish 3D Evolution offers digital and offset printers a scalable upgrade path for a full range of production environments. It delivers:

- High volume productivity with up to 3,123 B2 sheets size per hour (51 x 71 cm/20 x 28")
- Dynamic performance with its 8-up format (up to 75 x 120 cm/29 x 47"), perfect for the most demanding applications, including packaging
- Added value and sensory dimensional textures
- Produce prototype and « ready for press » affordably
- Three different widths: 52 x 120 cm, 64 x 120 cm and 75 x 120 cm (20 x 47", 25 x 47" and 29 x 47")

### IFOIL L – PERSONALIZED EMBOSSED VARIABLE DATA FOILING (VDF)

All JETvarnish 3D Evo models offer a fully integrated, inline option to add the award-winning iFOIL L Hot Foiling System. This functionality produces digital and variable embellishments such as very fine lines, small lettering and detailed texture effects on each piece. It is both a perfect prototyping tool and a complete high-volume production solution.

iFOIL L eliminates the need for films, dies, screens and make-ready. This allows quick and easy production of foil stamping jobs from one sheet to thousands of sheets, allowing printers, converters and trade finishers to expand into profitable new market segments.

Spectacular and unique effects are now available within a 100% digital process:

- Embossing from 3 to 232 microns (µm)
- Multiple colored foils applied in one pass (up to 5 colors)
- Variable data foiling (VDF) with 2D/3D UV coating
- Foil over foil to create dramatic special effects
- Unique capability to foil and emboss on plastic (including on Polypropylene/PP)

The JETvarnish 3D Evo and iFOIL L combine to create the visual and tactile excitement you've been looking for to distinguish your products in the marketplace. The software suite simplifies layout mask changes on sheets ranging from A4 format to 75 x 120 cm/29 x 47" and on substrates ranging from 150 to 800 microns (µm). Plus it produces brilliant foil effects on jobs printed on offset, flexo and digital presses. Foil can be applied on coated or uncoated papers, synthetics, plastics, laminated films and aqueous coated surfaces—adding value and profits to your business, while reducing outsourcing costs and job delays.



### INVESTMENT PROTECTION AND INCREASED PRODUCTIVITY

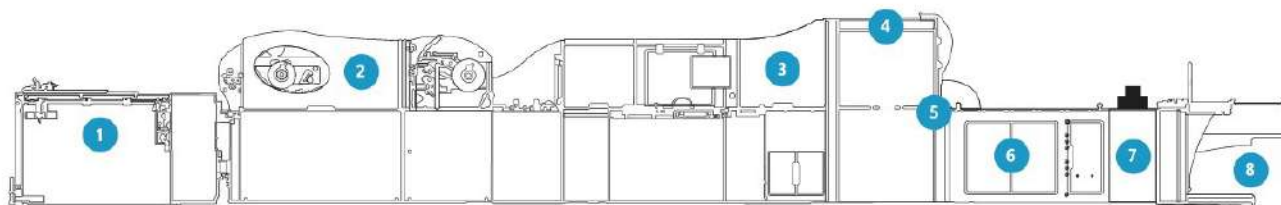
As your business grows, the JETvarnish 3D Evolution grows with it. The engine can adjust and expand according to changing business needs and opportunities. Evo Extension Kits upgrade machines right in the field, increasing productivity by fully embellishing more sheets per hour or increasing surface enhancement area.

### IMPROVED PRINTABILITY ON VARIOUS SUBSTRATES

The Corona Surface Treatment System (CSTS) is an optional module that works in line with the JETvarnish 3D Evo equipment regardless of model and printing width (for Evo 52/64/75). It's a well-proven and simple way to modify the surface tension of a substrate to improve the printability of a variety of substrate materials, regardless of the printing process. It minimizes using the time-consuming and costly lamination process.

Before the corona treatment, some substrates have a low surface energy, not allowing the varnish to "wet" homogeneously to the substrate, thus creating surface defects.

The CSTS uses an electric discharge transferred on the substrate using an electrode. The surface of the substrate is modified and better prepared prior to spot coating and eventually hot foiling. CSTS really pays off by increasing the dyne level or surface energy of the material, allowing the varnish to be perfectly laid.



**1. NEW PALLET STACKER**

Based on offset models, it simplifies pallet unloading and production workflows

**2. NEW IFOIL L MODULE**

With OptiFoil film optimization and foil roll management

**3. NEW AUTOMATED MAINTENANCE**

Inkjet head cleaning system

**4. NEW EVOLUTIONARY CHASSIS WIDTHS**

Available in 52/64/75 cm (20/25/29") — preserve your investment and expand your productivity over time

**5. NEW REVOLUTIONARY AIS SMARTSCANNER**

Each sheet is scanned, checked and treated like a separate, unique job. No registration marks necessary. Dramatic reduction of make-ready waste and setup time

**6. NEW MARGIN TABLE**

Motorized guides for improved productivity

**7. CORONA SURFACE TREATMENT SYSTEM (CSTS)**

Improves printability of substrate materials, regardless of the printing process

**8. NEW SHEET FEEDER**

Feed widths up to 75 cm/29"

**JETvarnish 3D Evolution DIGITAL 2D/3D SPOT UV COATER WITH INLINE HOT FOILING**

**TECHNICAL SPECIFICATIONS**

|                                     |  |
|-------------------------------------|--|
| <b>Printing technology</b>          | <ul style="list-style-type: none"> <li>• MGI's exclusive inkjet engine technology.</li> <li>• Drop-on-Demand (DoD) inkjet application.</li> <li>• Piezoelectric printheads in single pass printing.</li> <li>• Flexible and scalable architecture.</li> </ul>  |
| <b>Variable coating thicknesses</b> | Depending on your file and the substrate used, the coating thickness can vary from a traditional flat spot UV coating of 3 microns (µm) up to 232 µm for 3D raised texture effects and a tactile finish.   |
| <b>Production speed (1)</b>         | Up to 3,123 B2 sheets size per hour for all versions. The EVO 75 can reach up to 4,200 ISO B2 sheets per hour (landscape) and up to 2,251 ISO B1 sheets per hour.  |
| <b>Registration</b>                 | Left and right motorized registration side guides. Automatic registration using the built-in AIS SmartScanner technology for real-time management of entire sheet. No registration marks required.   |
| <b>Managed paper formats (2)</b>    | Min: 21 x 30 cm/8 x 11.8" (W x L)<br>Max: 52 x 120 cm/20 x 47"<br>64 x 120 cm/25 x 47"<br>75 x 120 cm/29 x 47"   |
| <b>Printable width areas (2)</b>    | 51 cm/20"<br>63 cm/24.8"<br>74 cm/29" <sup>(1)</sup>   |
| <b>Substrate thickness (3)</b>      | Motorized inkjet head height-adjustment.<br>Min: 135 gsm and not less than 150 µm/6 mil before printing and lamination.<br>Max: 800 gsm and not more than 800 µm before printing and lamination  |
| <b>Substrate compatibility (3)</b>  | Enhancement on most (3) matte or glossy laminated surfaces, with or without aqueous coating, layered paper, plastic, PVC and other coated materials. Spot 3D coat directly onto most (3) digital prints (e.g., MGI Meteor).  |
| <b>UV Coatings and capacity</b>     | 1 coating tank for both 2D and 3D applications. One high-capacity tank of 18 liters. "On-the-fly" tank changeover possible during production without any interruption or waste.  |
| <b>Automatic sheet-fed feeder</b>   | High capacity feeder able to pile up paper up to 60 cm/23.6" high for 75 x 120 cm (29 x 47") sheets. Approximately 4,000 sheets at 135 gsm.  |
| <b>Pallet stacker</b>               | Supports sheets up to size 75 x 120 cm (29 x 47") on pallet packaging.   |
| <b>Paper path</b>                   | <ul style="list-style-type: none"> <li>• 100% flat paper path.</li> <li>• Vacuum feed system.</li> <li>• Air feed system.</li> <li>• Automatic double sheet detection.</li> </ul>  |
| <b>In-line UV dryer</b>             | "On the fly" drying and curing via integrated UV lamps.  |
| <b>Front end system</b>             | <ul style="list-style-type: none"> <li>• Intuitive touchscreen software management suite controlled by a 27" monitor.</li> <li>• Includes functions for operators:                             <ul style="list-style-type: none"> <li>- Job cost calculator, image editor, queue manager and reprint, camera and print-heads settings.</li> </ul> </li> <li>• Dedicated controller for equipment settings and technical data.</li> <li>• Ethernet connection 10/100/1000 B1 in RJ 45.</li> </ul> |

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|---|---|
| <b>iFOIL L</b>                                  | Optional Digital Hot Foiling module application: standard sheet format 75 x 120 cm (29 x 47")<br>• Production Speed: Up to 1,200 (4) B2 sheets size per hour (or up to 25 m per minute – 65 ft per minute).<br>• Films: Uses a variety (5) of hot foils available on the market. Optimization system of film consumption.<br>• Film Rolls: Max. roll diameter and length: ± 30 cm/11.8" and from 400 to 2,000 meters of film (1,300 to 6,500 ft). Up to 5 simultaneous film rolls on the same axis (with a minimum of 10 cm/3.9" per roll). 2 cores available: 1 inch and 3 inch.<br>• Maximum Surface: Hot foil substrate surface can not exceed 74 x 119 cm (29.1 x 46.8").<br>• Embossing: 2D and 3D effects are possible at any time. The surface of the metallized film may be covered with a layer of varnish or another foil.<br>• Dry Air: Requires air without oil at 6 bar (87 psi) and 24 m <sup>3</sup> /h (14 cfm) supply. |
| <b>Other options</b>                            | <ul style="list-style-type: none"> <li>• 64 cm Evo Kit for Upgrade Enhancement: Option or later update for printing up to 64 x 120 cm/25 x 47" sheet size.</li> <li>• 75 cm Evo Kit for Upgrade Enhancement: Option or later update for printing up to 75 x 120 cm/29 x 47" sheet size.</li> <li>• Variable Data Enhancement (VDE): Optical "on-the-fly" variable data system uses camera and preprinted barcodes. Variable data for text, graphic and image on both 2D/3D spot coating and hot foiling areas.</li> <li>• Corona Surface Treatment System (CSTS)</li> </ul>   |
| <b>Maintenance and remote technical support</b> | <ul style="list-style-type: none"> <li>• New: automated inkjet head cleaning and wiping.</li> <li>• Daily maintenance completed in less than 10 min.</li> <li>• Majority of procedures are automated.</li> <li>• From cold start to production in less than 15 min.</li> <li>• Remote troubleshooting and support via included web video camera (high-speed internet connection required).</li> </ul>   |
| <b>Dimensions and weight</b>                    | 11.10 x 1.96 x 1.83 m / 36.4 x 6.4 x 6.0 ft (L x W x H)<br>Necessary clearance: 1 m (3.3 ft) on 3 sides and 2 m (6.6 ft) on the stacker side ± 5,000 kg/11,023 lbs  |
| <b>Electrical requirements</b>                  | JETvarnish 3D Evo + iFOIL L<br>40 kW (63 A) at 400 V – 50/60 Hz<br>20 kW (32 A) at 400 V – 50/60 Hz   |
| <b>Operating environment</b>                    | Temperature: 18 to 30 °C/64 to 86 °F. Relative humidity between 30 and 50% (no condensation)  |

The default sheet size is B2 (51 x 71 cm/20 x 28") unless otherwise stated.  
 (1) Speed will vary according to printing parameter used.  
 (2) Depending on model.  
 (3) Confirm substrate/toner/metallic film compatibility with MGL  
 (4) Speed will vary according to printing parameter used.  
 (5) Confirm substrate/toner/metallic film compatibility with MGL

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Item #: 3DevoBro 9/2017-C



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