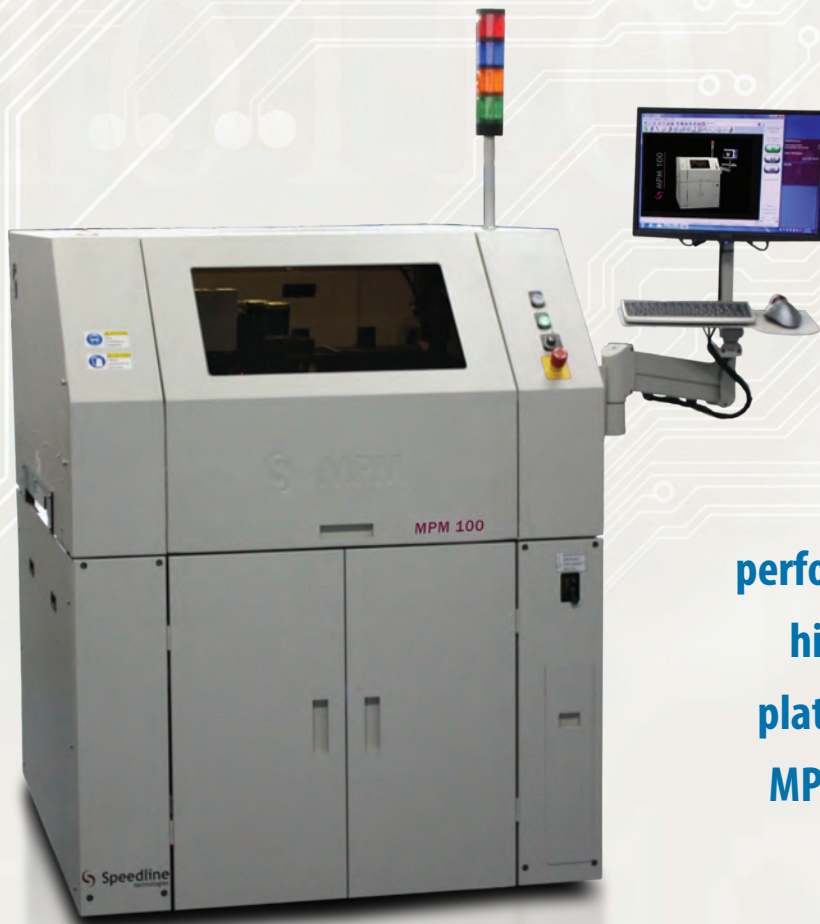


# MPM

Electronic Assembly Equipment

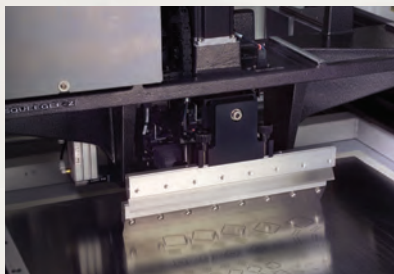
TW EAE

## MPM<sup>®</sup> 100 Printing System



**Tremendous price and performance value in this proven high-performance printing platform, built with legendary MPM quality and exceptional engineering.**

**A value-priced high-performance printing solution featuring innovative technology and outstanding capability.**



# MPM

## MPM 100: Meeting the Challenges

The MPM 100 is designed to meet the ever-growing challenges of today's electronics manufacturing world: high performance, user-friendly, flexible, space and operational efficient.

### Options:

- Programmable and closed-loop squeegees
- Automatic paste dispensing
- Barcode readers
- Post-Print 2D inspection
- Paste Height Monitor
- SPI Print Optimizer
- RapidClean
- StencilVision

# MPM 100

## EXCEPTIONAL VALUE

The MPM 100 delivers performance that one would expect to find only in higher-priced printing machines. This hard-working printer utilizes the robust, reliable Momentum series platform that has been proven to be at the top of its class in facilities around the world, yet its value pricing makes the MPM 100 an incredible bargain.

Cost-efficient and featuring a modest footprint, it grows with the user; innovative patented features can be added on or retrofitted as needed as the user's throughput demands grow.

The MPM 100 is flexible, configurable, and easy to use, with speed and accuracy unmatched by any other printer in its class, and offers the best of MPM performance standards, for high yields across a wide range of SMT PCB printing applications.

The MPM 100 can accommodate a wide range of PCB sizes from 609.6 mm x 508 mm (24" x 20") down to 50.8 mm x 50.8 mm (2" x 2"). Its Wet Print accuracy is +/- 20 microns @ 6 Sigma, CPK ≥2.0. Tighter performance tolerances mean higher repeatability with fewer defects. Plus, a cycle time of 11 seconds ensures moderate to high throughput for its size. For basic, repeatable printing quality with high yields and true affordability, the MPM 100 has no equal.

Numerous Patents protect many of the MPM 100's proven features, the result of decades of engineering. These features can be found on other MPM printers as well, including the world-class Momentum series printers. These patented features are your assurance of quality, stability, proven performance, and exceptional value in this hard-working, production-ready printing platform.



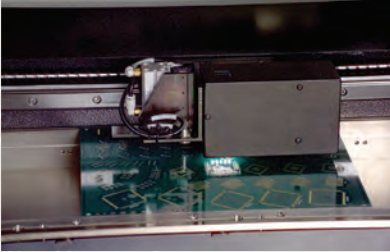
## Features and capabilities that deliver measurable value

### Built on a Solid Foundation.

Strength and stability are prerequisites for accuracy and precision when system parts are in motion and moving about at high speed. The MPM 100's major assemblies are driven by precision ball screws, not belts, which eliminate the need for calibrations. The worknest and camera gantry are decoupled for optimum motion stability, shorter settling time, and faster board and stencil alignment. CAN Control Drive Architecture supports faster processing speeds and the consequent overall reduction in wiring reduces Mean Time to Repair (MTTR). MPM 100's rigid frame is welded for low vibrations. This allows for higher repeatability and great reliability over time. Board alignment is achieved with minimum table motion; thus the PCB travels to the stencil more quickly.

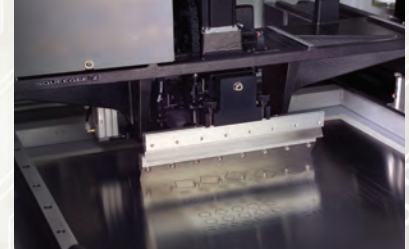
# MPM 100

## Options that add Capability and Value to your Process



### MPM Vision System & Inspection

MPM's patented printer-based Vision and Inspection system is a cost-effective way to verify print and paste deposit results. It's flexible enough to handle the complete range of today's most challenging components. This system measures the amount of paste covering the target pad and compares it with the required coverage. 2D Inspection is integrated directly into the stencil printer to provide an immediate source of data.



### Programmable Squeegees

Programmable and closed-loop squeegee systems ensure accurate and repeatable squeegee force with every print stroke; the system auto-compensates for squeegee deflection, and no force adjustment is needed for squeegee variations.



### Barcode Readers

Barcode reading enables product traceability and process verification for SPC. The Machine-mounted scanner reads and stores board data; the hand-held reader scans stencils, paste, tooling, squeegee blades, etc.

### Benchmark User Interface

Benchmark 4 (Windows 7 OS) offers the familiar Benchmark GUI and functionality, with added improvements in features and functionality. Benchmark 4 also incorporates unique, empowering new OpenApps (patent pending), creating new communication possibilities for easy two-way communication between the printer and your Manufacturing Execution System (MES).

## MPM 100 SPECIFICATIONS

### BOARD HANDLING

Maximum Board Size (X x Y)	609.6 mm x 508 mm (24" x 20")
<i>A dedicated workholder is required for boards with an X size greater than 20"</i>	
Minimum Board Size (X x Y)	50.8 mm x 50.8 mm (2" x 2")
Board Thickness	0.2 mm to 5.0 mm (0.008" to 0.20")
Maximum Board Weight	4.5 kg (10 lbs)
Board Edge Clearance	3.0 mm (0.118")
Underside Clearance	12.7 mm (0.5") standard Configurable for 25.4 mm (1.0")
Board Hold-Down	Fixed top clamps, centernest vacuum
Board Support Methods	Magnetic pins Optional: Vacuum side dams, vacuum pins, support blocks, dedicated fixtures, patented auto tooling, Quik-Tool

### PRINT PARAMETERS

Maximum Print Area (X x Y)	609.6 mm x 508 mm (24" x 20")
Print Gap (Snap-off)	0 mm to 6.35 mm (0" to 0.25")
Print Speed	0.635 mm/s - 304.8 mm/s (0.025 in/s - 12 in/s)
Print Force	0 to 22.7 kg (0 lb to 50 lbs)
Stencil Frame Size	737 mm x 737 mm (29" x 29") Adapters available for smaller sizes

### VISION

Vision Field-of-View (FOV)	10.6 mm x 8.0 mm (0.417" x 0.315")
Fiducial Types	Standard shape fiducials (see SMEMA standards), pad/aperture
Camera System	Single digital camera - MPM patented look up/down vision

### PERFORMANCE

Total System Alignment Accuracy and Repeatability	±12.5 microns (±0.0005") at 6 sigma, Cpk ≥ 2.0*
<i>Qualification is performed using production environment process variables; print speed, table lift and camera movement are included in the capability figure.</i>	
Wet Print Deposit Accuracy and Repeatability	±20 microns (±0.0008") at 6 sigma, Cpk ≥ 2.0*
<i>Based upon actual wet printing with positional accuracy and repeatability verified by a 3rd party measurement system.</i>	
Cycle Time	11 seconds standard

### FACILITIES

Power Requirements	200 to 240 VAC (±10%) single phase @ 50/60Hz, 15A
Air Supply Requirements	100 psi at 4 cfm (standard run mode) to 18 cfm (vacuum wipe) (6.89 bar @ 1.9 L/s to 8.5 L/s), 12.7 mm (0.5") diameter line, OD x 9.5 mm (3/8") ID line
Height (excluding light tower)	1589.4 mm (62.57") at 940 mm (37.0") transport height
Machine Depth	1394 mm (54.88")
Machine Width	1195.4 mm (47.06")
Minimum Front Clearance	508 mm (20.0")
Minimum Rear Clearance	508 mm (20.0")
Machine Weight	797 kg (1757 lbs)
Crated Weight	1090.5 kg (2399 lbs)

\* The higher the Cpk, the lower the variability with respect to the process specification limits. In a process qualified as a 6 sigma process (i.e., one that allows plus or minus 6 standard deviations within the specification limits), the Cpk is greater than or equal to 2.0.

Specification is subject to change without notice. Please consult factory for specifics.

ITW EAE maintains an ongoing program of product improvement that may affect design and/or price. We reserve the right to make these changes without prior notice or liability.