

High Throughput

Unparalleled Accuracy

Powerful Package



MPM[®] Momentum[®] Compact HiE

MPM Momentum Compact HiE

High Performance Printer

MPM Momentum Compact HiE

Accurate, Repeatable Performance

The MPM Momentum Compact HiE printer delivers a big impact in a remarkably small package. Boasting the highest throughput for its footprint in the industry, and remarkable wet print accuracy of ± 18 microns @ 6 sigma $Cpk \geq 2$, the performance and features that have been neatly engineered into the Momentum Compact HiE will impress users, as will the throughput volume for this lean, efficient printer.

Built to meet the growing challenges of Smartphone and Automotive applications, the flexible and configurable Momentum Compact HiE is designed for easy setup in back-to-back configurations that maximize yields while minimizing floor space requirements. Its smaller footprint incorporates the best in MPM's 'forward thinking' based upon new stencil size requirements, and back-to-back configurability.

Ideal for Back-to-Back Configuration

Back-to-back configuration is the optimal approach to dual lane processing. With the Momentum Compact, HiE back-to-back capability minimizes line length, maximizing use of factory floor space, and gives the user greater flexibility in-line configuration. Available with optional shuttle conveyors.



Accessibility, Flexibility, Configurability

Thoughtful design for access to controls and stencil wiper solvent, especially for back-to-back configurations, makes the Momentum Compact HiE a printer that's 'thinking ahead'.



Print Head Technology

The Momentum Compact HiE revolutionary EnclosedFlow™ print head delivers uniform printing performance across the spectrum of stencil aperture sizes and component densities, with each print stroke ending in a clean, 'green' finish that minimizes waste and stencil cleaning requirements. Designed to meet the toughest challenges of fine feature devices, the EnclosedFlow print heads' unique approach to uniform aperture fill delivers unmatched print results with volumes up to 50%!

Momentum Compact HiE

Clean lines, superb engineering, and compact performance are hallmarks of the MPM Momentum Compact. High defect-free yields mean fast ROI and robust products in the field.

Incomparable Value to Performance

Multiple standard features and options add value to superior performance - including the EnclosedFlow printing system, SPI Print Optimizer, EdgeLoc board snugging, RapdiClean, Paste Height Monitor, AccuCheck™ Print Capability Verification, Auto Paste Dispenser, 2D Contrast and Enhanced Inspection, and much more.

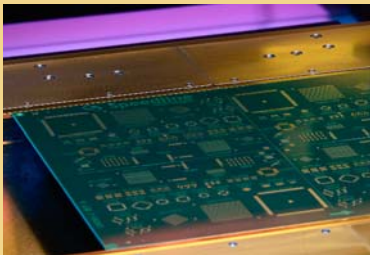
SPI Print Optimizer

The SPI Interface feature communicates with the external Solder Paste Inspection (SPI) system to continuously monitor and auto-correct X,Y and theta registration 'on the fly' to stay on target and prevent print defects.



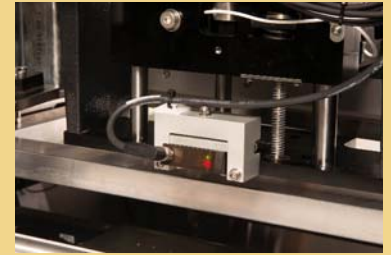
RapidClean™

A flexible, high speed stencil cleaning solution that improves stencil cleaning performance and reduces cycle time by as much as 12 seconds.



EdgeLoc™ Board Clamping

MPM's EdgeLoc board clamping system takes board handling to the next level. This unique solution, a standard feature on the Momentum Compact HiE firmly holds the board without the use of top clamps; delivering optimal stencil to board gasketing for higher paste release efficiency and reduced under stencil wiping.



Paste Height Monitor

Effective solution designed to prevent defects caused by inadequate paste on the stencil.



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MPM MOMENTUM COMPACT SPECIFICATIONS

BOARD HANDLING

| | |
|----------------------------|---|
| Maximum Board Size (X x Y) | 457 mm x 330 mm (18" x 13") |
| Minimum Board Size (X x Y) | 50.8 mm x 50.8 mm (2" x 2") |
| Board Thickness | 0.2 mm (0.008") to 5.0 mm (0.20") |
| Maximum Board Weight | 4.5 kg (9.92 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, EdgeLoc Snugging System |

| | |
|-----------------------|---|
| Board Support Methods | Centernest Vacuum. Magnetic pins, Support blocks, Vacuum pins, Optional Dedicated fixtures (tool-less) or Optional Quik-Tool |
|-----------------------|---|

PRINT PARAMETERS

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|----------------------------|--|
| Maximum Print Area (X x Y) | 457 mm x 330 mm (18" x 13") |
| Print Gap (Snap-off) | 0 mm to 6.35 mm (0" to 0.25") |
| Print Speed | 0.635 mm/sec - 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 | 650 mm x 550 mm (25" x 22"), |

VISION

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|----------------------------|--|
| Vision Field-of-View (FOV) | 10 mm x 8 mm (0.39" x 0.31") |
| Fiducial Types | Standard shape fiducials (see SMEMA standards), pad/aperture |
| Camera System | Single digital camera - patented look up/down vision |

PERFORMANCE

| | |
|----------------------------|---|
| Total System Alignment | ±12.5 microns |
| Accuracy and Repeatability | (±0.0005") at 6 sigma, Cpk of greater than or equal to 2.0* |

Qualification is performed using production environment process variables; print speed, table lift and camera movement are included in the capability figure.

| | |
|----------------------------|---|
| Wet Print Deposit | ±18 microns |
| Accuracy and Repeatability | (±0.0007") at 6 sigma, Cpk of greater than or equal to 2.0* |

Based upon actual wet printing with positional accuracy and repeatability verified by a 3rd party measurement system.

| | | |
|------------|-------------|----------------------|
| Cycle Time | Compact HiE | 7.5 seconds standard |
|------------|-------------|----------------------|

FACILITIES

| | |
|--------------------------------|--|
| Power Requirements | 200 to 240 VAC (±10%) single phase @ 50/60Hz, 15A |
| Air Supply Requirements | 90 psi at 4 cfm (standard run mode) to 18 cfm (vacuum wipe) (6 bar @ 5 L/s to 12 L/s), 12.7 mm (0.5") diameter line x 9.5 mm (3/8") ID line |
| Height (excluding light tower) | 1562 mm (61.5") at 940 mm (37.0") transport height |
| Machine Depth | 1200 mm (47.25") |
| Machine Width | 1106 mm (43.5") |
| Minimum Front Clearance | 508 mm (20.0") |
| Minimum Rear Clearance | 508 mm (20.0") |
| Machine Weight | 862 kg (1900 lbs) |
| Crated Weight | 1155.5 kg (2547 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.

ABOUT SPEEDLINE TECHNOLOGIES

Speedline Technologies, a division of Illinois Tool Works, Inc. (NYSE: ITW), is the global leader in process knowledge and expertise for the PCB assembly and semiconductor industries. Based in Franklin, Massachusetts, U.S.A., the company markets four best-in-class brands — Accel microelectronics cleaning equipment; Camalot dispensing systems; Electrovert wave soldering, reflow soldering, and curing, and cleaning equipment; and MPM stencil and screen printing systems. For more information, visit us at www.speedlinetech.com.

Speedline Technologies 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.



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