Speedline technologies

The world's most accurate printer provides extraordinary performance.

MPM

Accela™ Stencil Printer

The premier printing platform for the perfect balance of throughput and quality

Creating a New Standard

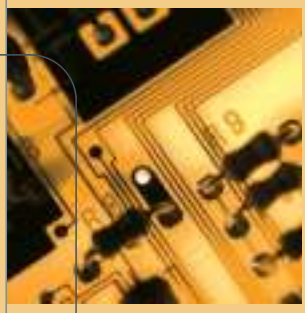
Printer cycle time is a common metric used throughout the industry. But cycle time is only a single factor in printer productivity — perhaps not even the most important. What about board handling time, print process parameters, squeegee use, stencil cleaning, and other critical elements?

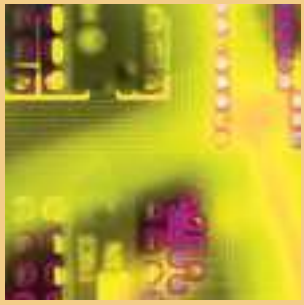
A standard based on throughput is needed. One that takes into account all critical factors to establish a truly useful measure of printer productivity.

With the innovative MPM Accela stencil printer, that new standard becomes a reality. Simply put, Accela produces more good boards per hour.

Aided by unique parallel processing, its throughput is unmatched. And Accela's design minimizes every single source of downtime: product setup, product changeovers, consumables replenishment, maintenance, and repairs. Result: throughput gains of more than 20% over the nearest competitor.

LIKE NO OTHER PRINTER ON THE MARKET, ACCELA TRULY OPTIMIZES THE QUALITY, NUMBER, AND COST OF BOARDS PRODUCED PER HOUR.

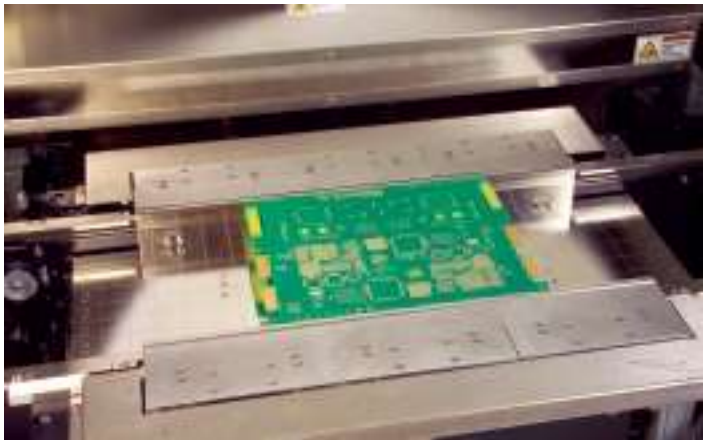




MPM

Accela

Introducing the World's Most Advanced Stencil Printer



Increasing Throughput and More

The MPM Accela printer from Speedline represents the next generation of stencil printers. It is the ultimate printing solution for manufacturers of high-volume, high-technology circuit boards. Accela handles the largest, thinnest, or most complex boards with unprecedented speed, accuracy, and ease.

Its no-compromise design utilizes the best features of our proven platforms — and includes 11 patented and patent-pending innovations.

A major breakthrough: parallel processing that allows critical operations to be carried on simultaneously, not serially. This leads to a host of Accela advantages:

- Unmatched raw throughput — gains of 20% or more good boards per hour
- Highest accuracy
- Unbeatable repeatability
- Advanced consumables management for fast setup and changeover
- Proven reliability
- Tested flexibility and ease of use

OEM and CEM manufacturers face shrinking profits and ferocious competition. They need a printing solution that maximizes uptime, improves final product yield, generates more quality boards per hour, and increases the return on their capital investment. The Accela printer is that solution.

Providing Superior Accuracy

Accela's substantial yield improvement over traditional printers isn't solely due to the parallel processing that allows increased inspection frequency. The critical metric isn't just boards per hour: it's *good* boards per hour.

Accela delivers 12.5 microns at 6 Sigma for alignment and 25 microns at 6 Sigma for printing performance. That precision helps it eliminate waste from errors and bad boards. It also makes it the most accurate, repeatable stencil printer ever — a fact verified by an independent, third-party testing company. This unsurpassed performance provides both the highest throughput and the greatest yield for even the most difficult applications. This is especially important as the lead-free transition presents additional challenges for the printing process.

Paste Dispenser:
Located between the blades to reduce travel and cycle time

Stencil Cleaner:
Operates in parallel with inspection, dispensing, and alignment routines to maximize throughput

Stencil Shuttle:
Patent-pending design moves to the back of the machine to allow for simultaneous activities to maximize throughput

Vision System:
Comprehensive inspection capabilities including 2D, BridgeVision™, and StencilVision™

Software:
Easy-to-use, icon-based Benchmark™ software with Windows® XP for improved performance

CANopen Controls:
Electrical architecture that supports parallel processing to maximize throughput

Frame:
Zanite™ material provides solid foundation for superior accuracy and repeatability

Supplying Significant Cost Savings

Certainly higher yield performance promises quicker payback. But this printer is built to lower users' cost of ownership in every other way as well.

It is designed to optimize consumables management while minimizing downtime to increase utilization. It is easy to use, easy to service, and is constructed to provide the lowest maintenance costs of any printer in its class.

Offering Robust Reliability

Manufacturers producing critical-specification assemblies demand assured uptime and long service life. Accela fulfills their strictest requirements. It's a solid platform that performs the most challenging customer tasks with exceptional reliability. The base configuration of the Accela provides a comprehensive set of capabilities. With a broad option set, it can be configured to meet any manufacturing challenge.

Feature	Standard	Option
Windows XP Operating System	X	
Benchmark™ Software	X	
SPC Data Collection	X	
Closed-Loop Squeegee Head	X	
CANopen Control System	X	
Adjustable Stencil Shelf	X	
Look-Up/Look-Down Vision*	X	
Vacuum Wiper**	X	
17" Flat-Panel Display	X	
Triple Track Board Handling	X	
Solvent Delivery System*		X
Rheometric Pump*		X
Paste Dispenser** (6 and 12 oz)		X
Contrast-Based 2D Inspection		X
Texture-Based BridgeVision®*		X
Texture-Based StencilVision™**		X
Temperature Control Unit		X
Gel-Flex™ Tooling**		X

* Patented Technology
** Patent-Pending Technology

SURFACE-MOUNT TECHNOLOGY MANUFACTURERS ARE MOVING TOWARD FINER PITCH CAPABILITY SO PROCESS QUALITY MEASUREMENTS SHIFT UPSTREAM. THE PRINTING PROCESS IS EVEN MORE CRITICAL, AND STENCIL PRINTERS MUST CHANGE WITH THE SMT WORLD. ONLY THE NEW ACCELA PRINTER MEASURES UP TO THESE NEW CHALLENGES.

The Flexibility to Handle Any Job

The new Accela platform handles a myriad of applications — from printing on the highest-density, most complex boards to meeting lead-free manufacturing requirements.

It offers the operator tool-free hardware interfaces with a modular design featuring CANopen electronic architecture for advanced communications and easy maintenance and upgrading. On the software side, Accela features an exclusive, easy-to-use Benchmark™ graphical user interface running under Windows XP for effortless networking.

WORLD HEADQUARTERS
16 Forge Park, Franklin, MA 02038
Tel: (508) 520-0083
Fax: (508) 520-2288

www.speedlinetech.com

MANUFACTURING FACILITIES
ACCEL/ELECTROVERT
Highway 5 South, Camdenton, MO 65020
Tel: (573) 346-3341
Fax: (573) 346-5554

CAMALOT/MPM
16 Forge Park, Franklin, MA 02038
Tel: (508) 520-0083
Fax: (508) 520-2288

SALES AND CUSTOMER SUPPORT OFFICES
U.S.A.
2541 Technology Drive Ste. 401
Elgin, IL 60123
Tel: (847) 426-4787
Fax: (847) 426-7383

MEXICO
Carretera Base Aerea #5850
Km. 5, Edificio 11
Zapopan, Jalisco, Mexico
Tel: +52 (3) 818-9017
Fax: +52 (3) 818-9816

EUROPE
Speedline Technologies GmbH
IM Gefierth 14
D-63303 Dreieich,
Germany
Tel: +49 (0) 6103-8320
Fax: +49 (0) 6103-832-299

ASIA/PACIFIC
Speedline Technologies Asia Pte Ltd
150 Kampong Ampat, #05-08 KA Centre
Singapore 368324
Tel: +65-6286 6635
Fax: +65-6289 9411

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MPM ACCELA™ SPECIFICATIONS

BOARD HANDLING	
Maximum Board Size (X x Y)	558 mm x 508 mm (22" x 20")
Minimum Board Size (Y x X)	50.8 mm x 50.8 mm (2" x 2")
Board Thickness	0.152 mm (0.006") to 12.7 mm (0.500"), excluding warpage tolerance
Maximum Board Weight	7 kg (15 lb)
Board Edge Clearance	Configurable to 3 mm (0.120") or 5 mm (0.200")
Maximum Underside Clearance	25 mm (1.0")
Transport Speed	8 mm/sec to 1270 mm/sec (0.3"/sec to 50"/sec)
Transport Height From Floor	813 mm to 1041 mm (32" to 41")
Transport Track Feed Direction	Left-Right, Right-Left, Right-Right, Left-Left
Conveyor Length	Choice of 1416 mm (55.7"), 1727 mm (68"), or 2048 mm (80.6")
Board Hold-Down	Integrated y-snuggers, top clamps (software-enabled), underside centernest vacuum, venturi vacuum
Board Support Methods	Magnetic pins and blocks standard, dedicated workholders and Gel-Flex™ optional

PRINT PARAMETERS	
Maximum Print Area (X x Y)	558 mm x 508 mm (22" x 20")
Snap-off	-0.025 mm to 12.7 mm (- 0.001" to 0.500")
Print Speed	6 mm/sec to 305 mm/sec (0.25"/sec to 12"/sec)
Print Force	0.4 kg to 22 kg (0.9 lb to 50 lb)
Print Stroke	±280 mm (±11") from center
Stencil Frame Size	737 mm x 737 mm (29" x 29") adjustable to 584 mm x 584 mm (23" x 23") for tubular frames. Optional stencil frame adapter for cast frames.

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 camera — patented look up/down vision

PERFORMANCE	
Vision Alignment Repeatability and Accuracy	±12.5 microns (±0.0005") at 6 Sigma, Cp of greater than or equal to 2.0, verified by independent, third-party testing company.
Print Deposit Repeatability and Accuracy	±25 microns (±0.001") at 6 Sigma, Cp of greater than or equal to 2.0, verified by independent, third-party testing company
Cycle Time	Less than 5.5 sec

FACILITIES	
Power Requirements	208 to 240 V ac @ 50/60 Hz (±5%) 15 A
Air Supply Requirements	100 psi at 4 cfm (run mode) to 18 cfm (vacuum wipe) (7 bar @ 5 L/s to 12 L/s), 12.7 mm (0.5") diameter line
Height (excluding light tower)	1950 mm (76.7") max at tallest board load height
Depth	2169 mm (85.4")
Conveyor Width	Choice of 1416 mm (55.7"), 1727 mm (68"), or 2048 mm (80.6")
Cover Width	1357 mm (53.4")
Front and Rear Clearance Minimum	432 mm (17")
Machine Weight	2205 kg (4850 lb)
Crated Weight	2722 kg (5990 lb)

* The higher the Cp, 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 Cp is greater than or equal to 2.0.

ABOUT SPEEDLINE TECHNOLOGIES

Speedline Technologies 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 five best-in-class brands — Accel microelectronics cleaning equipment; Camalot dispensing systems; Electrovert wave soldering, reflow soldering, and cleaning equipment; MPM stencil and screen printing systems; and Protect global services, support, and training solutions. 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.