

# ASM



ENABLING THE DIGITAL WORLD

## ASM E-SOLUTIONS LINE

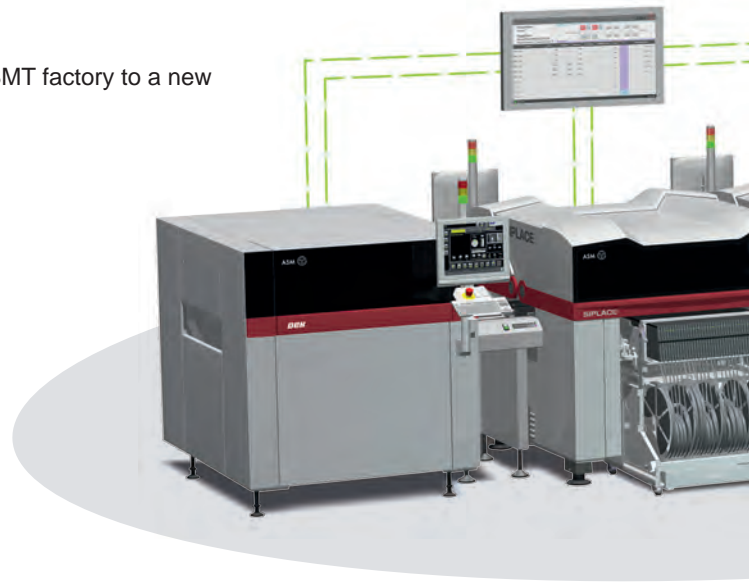
Smart, efficient, and flexible

# ASM E-SOLUTIONS LINE – YOUR ENTRY TO THE SMART SMT FACTORY

Whether you run an R&D department and make prototypes, produce in small lots or provide manufacturing services – cost and flexibility are of paramount importance in the midspeed world.

That's why we developed our ASM E-Solutions Line – a powerful, highly efficient solution with perfectly coordinated high-quality hardware components that sets new standards in the midspeed segment. We combined this power package without premium software to provide perfect support for your workflows around the SMT line.

Make your production smart and raise your entire SMT factory to a new level of flexibility, efficiency and quality.



## SMART SOFTWARE



### Software makes the difference

The ASM E-Solutions Line uses the same premium software that runs on ASM's high-end solutions – total connectivity and more options for maximum investment protection.

### Maximum transparency on the line

Give your employees all the information they need to ensure a line operation that's smooth and trouble-free. The ASM Line Monitor displays status information and coordinates line operations.

### Modern software wizards

Component teaching, offline programming, optimization – software wizards guide your operators quickly and securely through even the most complex entries.



## SMART SERVICE



### All from a single source

ASM is the developer, manufacturer and direct point of contact for all technical and sales-related questions around the ASM E-Solutions Line. Sales, service, SMT Center of Competence, access to experts, quick spare parts availability, time-saving video training seminars – all are features that ASM is famous for worldwide. With the ASM E-Solutions Line, you, too, will benefit from our smart services.

# SMART FLEXIBILITY

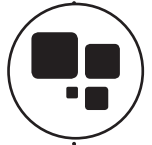
## Premium software

Identical station and workflow software for all ASM solutions (midspeed to high-end)



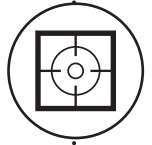
## Huge component spectrum

01005 to  
200 × 110 mm – all covered with only three head types



## Intelligent vision system

One image per component, component-specific illumination settings, PCB inspection, odd-shape placement, component fracture checking, and a whole lot more



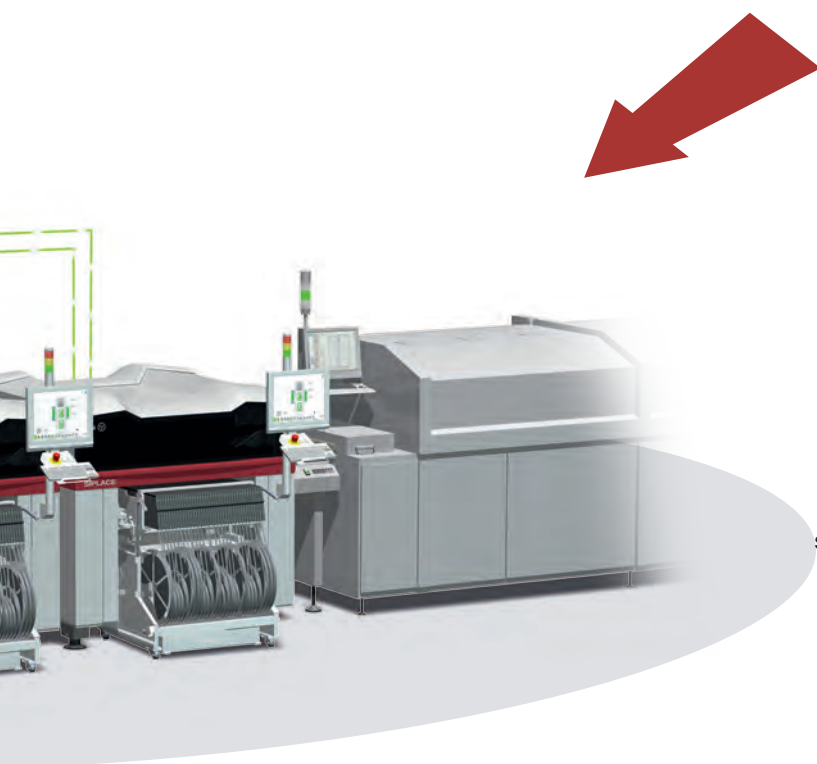
## Flexible single-lane transport

With automatic width adjustment and optional board length of 1,200 mm



## Touchless/low-force placement

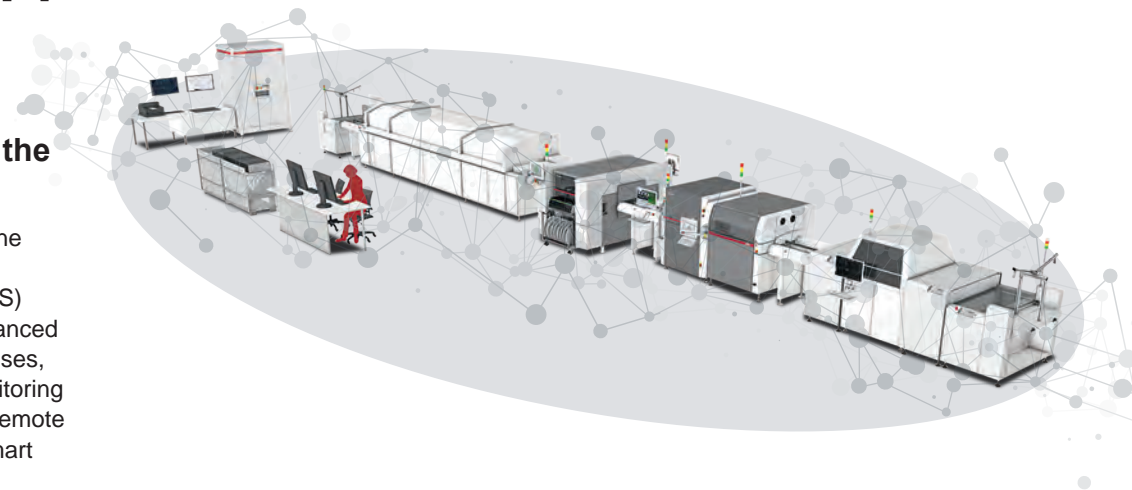
Touchless placement and forces as low as 0.5 N



# SMART CONNECTIVITY

## Perfectly integrated into the smart factory

IIoT interfaces for integration into line and factory systems (ASM OIB, IPC-HERMES-9852, IPC-CFX, MES) and the cloud (ADAMOS) with advanced workflow solutions for setup processes, material management, factory monitoring and factory integration, as well as remote maintenance with ASM Remote Smart Factory.



# E BY DEK AS FLEXIBLE AS YOUR APPLICATIONS

Is your production changing? Where you had to invest in new printing modules in the past, you can now just add options to your modular E by DEK – whether for conveyors, oversized boards, clamps, understencil cleaning, monitoring, and a whole lot more.

Our modular hardware is supplemented by premium software. Enjoy the same features that are available with our top models: offline programming, rapid product changeovers, flexible configuration, and easy operation. All of these make the E by DEK extremely flexible and protect your investments.



## E-PERFORMANCE

Turn your E by DEK into a high-speed solution.

- Core cycle times of as little as 8 seconds
- Dual-speed conveyor motor for soft stops
- State-of-the-art clamping systems
- Semi-automatic stencil loading
- Top ratings in speed, quality, changeover efficiency and repeat accuracy
- Application packs available for any requirement



## E-QUALITY

Are top quality and process stability important to your customers?

- High-quality components ensure stable and reliable printing processes even for today's fine-pitch applications
- Paste inspection system
- State-of-the-art process control software
- DEK Paste Roll Height Monitor



## E-USABILITY

For maximum flexibility and production stability

- Powerful premium software with an intuitive user interface
- Keep an eye on the whole line with the ASM Line Monitor
- Patented clamping systems for any requirements
- Oversized and heavy boards
- Special understencil cleaning for oversized boards
- Dual-speed conveyor motor
- Adjustable-width stencil mount
- Fast, semi-automatic stencil loading





## E-FACTS

Machine performance	Specifications
Alignment	@ $\pm 12.5 \mu\text{m}^*$
Machine accuracy	> 2,0 C <sub>mk</sub> @ $\pm 25 \mu\text{m}$ , (6 sigma)**
Shortest core cycle time (CCT)	11 seconds (8 seconds with option)
Operating system	Windows 7 Standard embedded
Squeegee pressure	Software-controlled, motorized with $\pm 1 \text{ kg}$ closed-loop feedback
Stencil positioning	Depth stop or semi-automatic stencil loading (optional)
Stencil mount	736 mm x 736 mm (29" x 29") or flexible stencil width adjustment for sizes ranging from 381 mm to 736 mm with frame thickness ranging from 25 mm to 38 mm (optional)
Understencil cleaning	300/400/520 mm DEK Interchangeable Under Stencil Cleaner (DEK IUSC), programmable for wet, dry and vacuum cleaning
Substrate sizes	50 mm (X) x 40.5 mm (Y) to 510 mm (X) x 508.5 mm (Y)
Substrate thicknesses	0.2 mm to 6 mm
Product changeover	< 2 min***
Program creation	< 10 minutes***
Substrate clamping	Over-the-top clamping (OTT) Lateral clamping (optional) Substrate vacuum (optional)
Temperature and humidity sensors	Statistical recording of temperature and humidity readings
Paste verification	Hawkeye 750 (optional)

\* Alignment accuracy is calculated with third-party QC-Calc software and comprises substrate loading/unloading, clamping, and the movement of camera systems and tables.

\*\* Machine capability is calculated with third-party QC-Calc software and comprises substrate loading/unloading, clamping, and the movement of camera systems and tables.

\*\*\* Under optimal conditions

# E BY SIPLACE

## THE FLEXIBLE ALL-ROUNDER

The new performance benchmark in the midspeed segment. Based on high-quality hardware with linear drives, advanced conveyors, intelligent feeders, modern placement heads, and the unerring SIPLACE vision system. Programming, operation and monitoring use the same functional and reliable premium software that runs on high-end SIPLACE platforms.

You have access to our smart workflow solutions; can create, optimize and verify setups, programs and production schedules; support your line staff via the ASM Line Monitor; and control your production transparently and paper-free.

Sample configurations for more quality, improved performance, and easier operation.



### E-PERFORMANCE

Configure your E by SIPLACE for maximum performance.

- SIPLACE combi-heads for precision, speed and flexibility
- Freely programmable placement force control (down to 0.5 N)
- SIPLACE digital vision system for precise and reliable placement
- Intelligent, hot-swappable and low-maintenance feeders with precision drives
- Component tables for speedy setup changeovers – up to 120 8-mm slots for each E by SIPLACE



### E-QUALITY

The E by SIPLACE sets new placement quality standards in the all-round segment

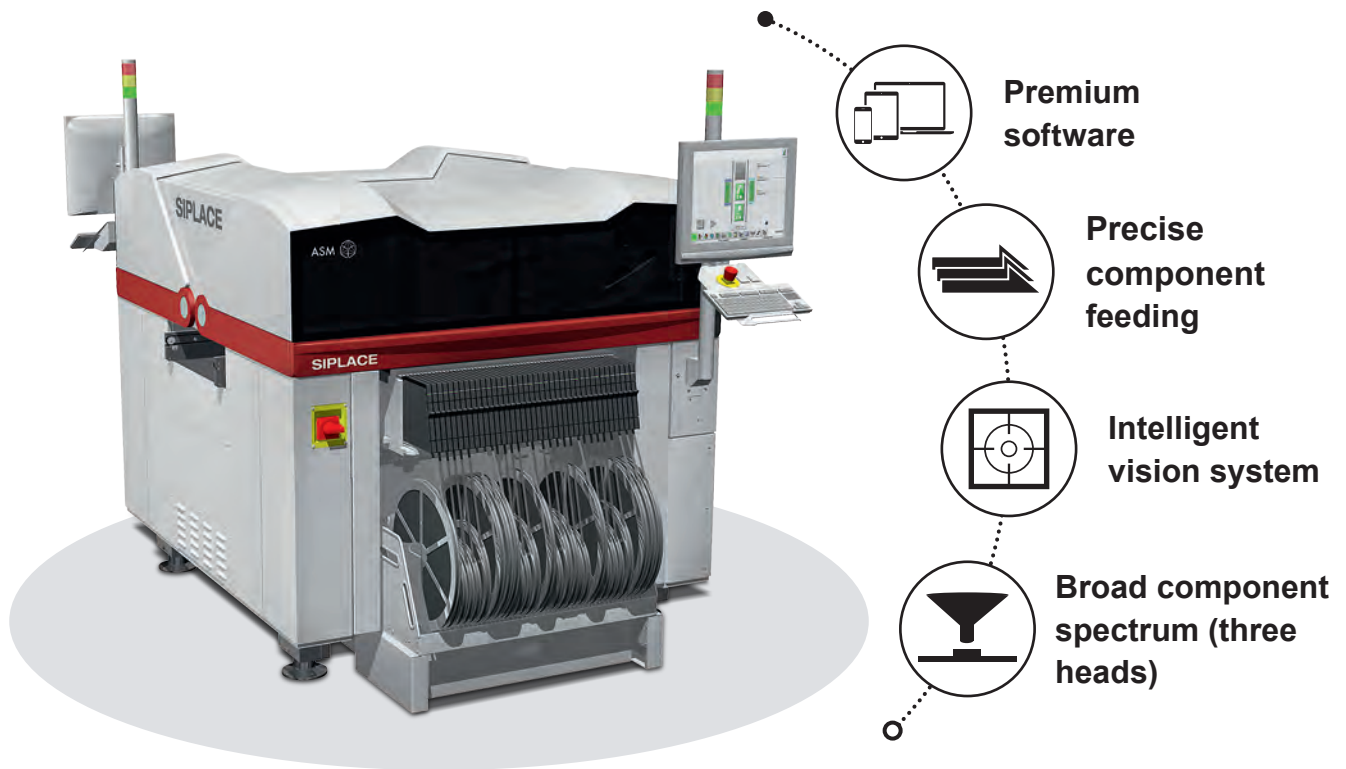
- High-precision linear drives for all axes
- Exact positioning via high-resolution scaling
- Freely programmable placement force control
- High-resolution digital SIPLACE vision system
- One image per component with configurable illumination settings
- Extensive and reliable setup controls



### E-USABILITY

The new standard for ease of operation, user guidance, and low operating costs.

- ASM Line Monitor for more transparency and reliable operator guidance on the line
- Unique, flexible CP12/PP combi-head
- Quick and easy software-driven switching between collect-and-place and pick-and-place modes for an exceptionally broad component spectrum
- Software wizards for quick and easy operation
- Flexible setup concepts
- Low-maintenance components
- Premium software with access to modern ASM workflow solutions



## E-FACTS

Placement heads	CP14	CP12	CP12/PP	TH
Component spectrum	01005 to 6 x 6 mm	01005 to 18.7 x 18.7 mm	01005 to 45 x 87.5 mm	0201 to 200 x 110 mm
Component heights	4 mm	7.5 mm	19 mm	25 mm
Accuracy (3 sigma)	34 µm	41 µm	30 µm	30 µm
Speed	45,300 cph	24,300 cph	24,200 cph	5,200 cph

Placement platform	E by SIPLACE			
Placement heads	CP14, CP12, CP12/PP, TH			
PCB size (L x W)*	1,200 x 460 mm			
PCB thickness	0.3 to 4.5 mm			
Feeder slots	120 x 8 mm			
Power supply	3 x 200/208/220/240/380/400/415 VAC ± 10%, 50/60 Hz, 1.8 KW			
Compressed air	5.0 bar (0.5 MPa) - 10.0 bar (1.0 MPa)			
Compressed air requirement	90 NL/min	90 NL/min	140 NL/min	185 NL/min
Dimensions (L x W)**	1,500 mm x 1,666 mm			
Weight***	1,850 kg			

\* PCB lengths from 490 mm to 1,200 mm with Long-Board Option only

\*\* Without component or changeover tables

\*\*\* Single-sided



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Website

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