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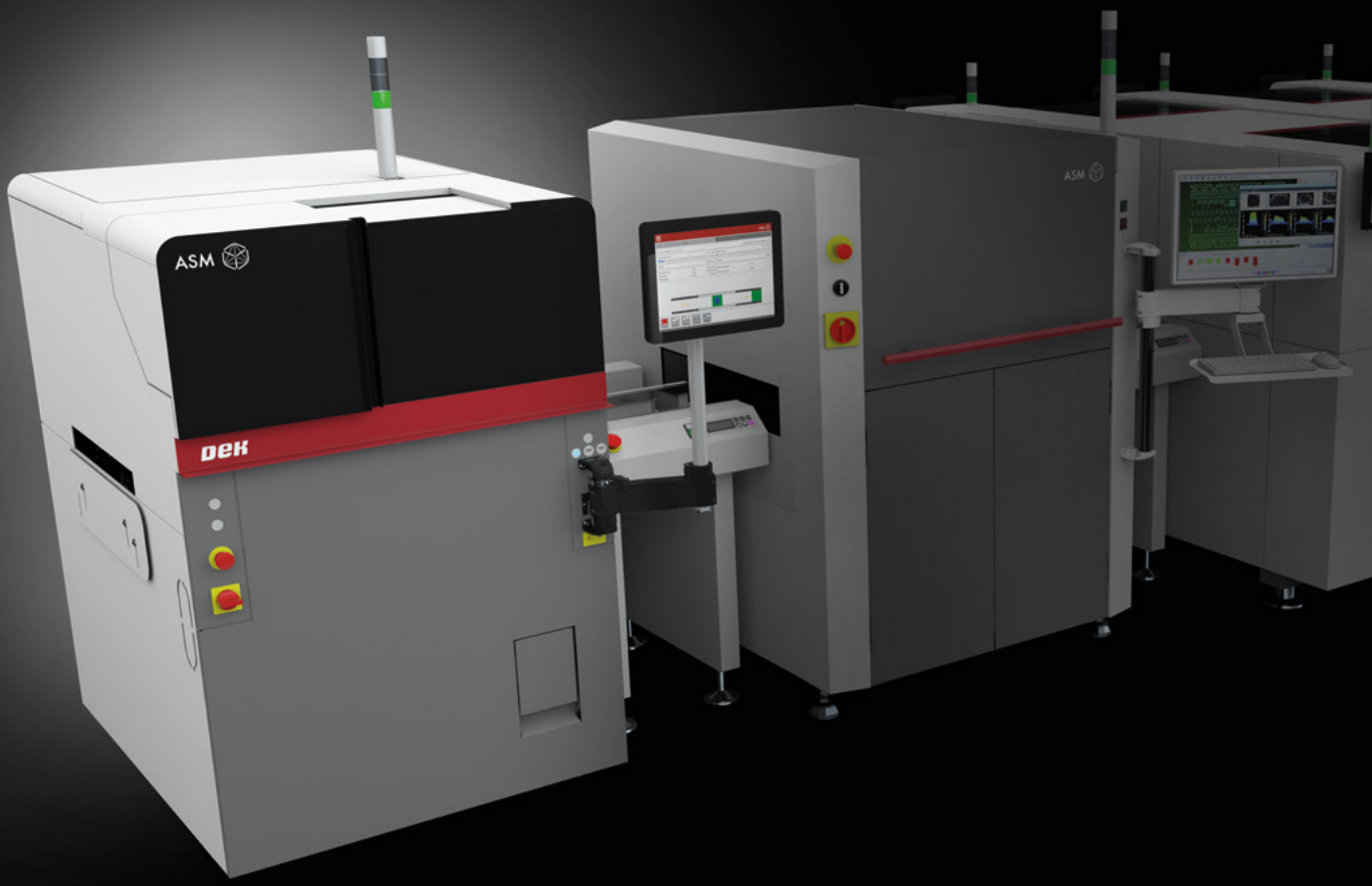

ENABLING THE DIGITAL WORLD

DEK TQ printer platform

Maximum quality, performance and flexibility for Open Automation

DEK TQ PRINTER PLATFORM
MAXIMUM QUALITY AND PERFORMANCE PAIRED WITH HIGH FLEXIBILITY

Super-fast, exceptionally precise, and a real space-saver – the numbers speak for themselves: Core cycle time of 5 seconds, wet-printing accuracy of ±17.0 microns @ 2 C_{pk}, and a footprint of only 1.3 square meters. Maximum flexibility thanks to two versions: DEK TQ for boards up to 400 mm x 400 mm and DEK TQ L for boards up to 600 mm x 510 mm.

The machine achieves its exceptional speed in part through its three-stage transport and its unique NuMotion controllers with fiber-optic wiring. Newly developed drives, off-belt printing and innovative clamping systems ensure a new level of accuracy and an extremely stable printing process – certified by ASMPT because the precision of each machine is measured and documented prior to delivery.

With the Dual Access Cover for hot-swapping paste cartridges, automatic Smart Pin Support and a series of more smart features, the printers run on average for more than eight hours without a single user assist. And closed-loop links with SPI systems guarantee maximum efficiency.

The printer platform fits seamlessly into the Open Automation concept and delivers with IPC-HERMES-9852 and IPC-CFX board-related M2M and M2H communication along the line and integrates seamlessly with MES, ERP and AIV fleet management systems. In addition, a wide range of options enables even more advanced degrees of paste printing automation in the integrated smart factory.

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DEK TQ
INNOVATIONS

Newly developed, flexible high-speed stencil cleaning system

With extra-large fabric rolls, easy replaceable cleaning body and a new dispenser system for the cleaning medium. Easy change of cleaning and fabric roll width.

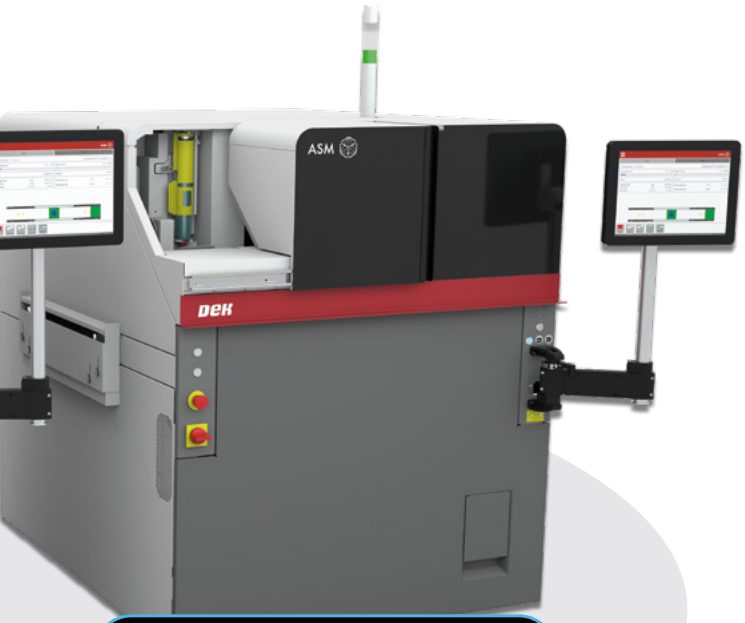
Innovative printhead

With integrated paste height control and a new squeege that’s faster and more accurate.

Smart Pin Support

Automatic and flexible support for setting pins with verification of pin position and height reduces manual assists.

THE DEK TQ IS YOUR **COMPETITIVE ADVANTAGE**



OPEN AUTOMATION

With its many interface standards, the DEK TQ printer platform fits seamlessly into the integrated smart factory while its growing number of options automates setup changeovers and minimizes operator assists.

Maximum printing quality

New clamping process for off-belt printing, an nnovative printhead and drive, and full-area pneumatic stencil clamping

Maximum precision

Wet-print accuracy of up to ±17.0 microns @ 2 C_{pk}
Paste printing for 0201m components

Maximum throughput

Core cycle time of 5 seconds (DEK TQ) and 6.5 seconds (DEK TQ L)

Fast 3-stage transport

Linear drives, innovative clamping systems, off-belt printing, ASM NuMotion controller

Up to 8 hours without assists

Understencil cleaning system with 22-meter fabric roll and 7-liter cleaning fluid supply, automatic paste management, and automatic Smart Pin Support

Open, easy to integrate

IPC-HERMES-9852, closed-loop to SPI, ASM OIB, IPC-CFX

Efficient programming

New instinctive software and offline programming with WORKS software

Best floorspace performance

Footprint of only 1.3 square meters (DEK TQ) and 1.95 square meters (DEK TQ L)

Back-to-back

The perfect solution for dual-conveyor lines

Linear drives, clamping systems, and innovative conveyors

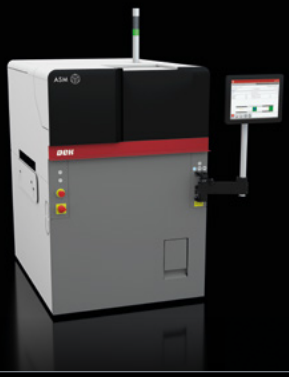
That standard 3-stage conveyor with its new off-belt printing ensures quick and extremely stable printing processes.

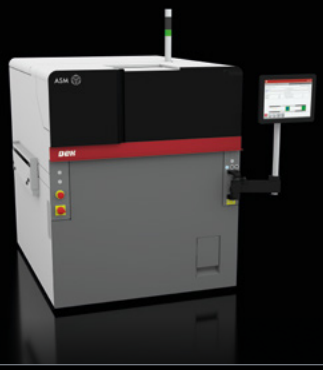
DEK All Purpose Clamping (APC)

Universal and flexible clamping system that automatically adapts to the board shape and thickness thanks to software-control linear drives.

More about the DEK TQ

DEK TQ printer platform





Machine type	DEK TQ	DEK TQ L
Standard configuration	**Description**	
Machine accuracy	> 2.0 C_{mk} @ ±12.5 microns (±6 sigma)	
Wet-printing accuracy	> 2.0 C_{pk} @ ±17.0 microns (±6 sigma)	
Shortest core cycle time (CCT)	5 seconds	6.5 seconds
Maximum print area	400 mm (X) × 400 mm (Y) (1-stage conveyor)	560 mm (X) × 510 mm (Y) (1-stage conveyor)
Controller	Nu-Motion controller	
Axis drive	Each linear drive with high-precision encoders for camera axis and understencil cleaning	
Squeegee pressure control	Software-controlled, motorized with closed-loop feedback	
Stencil positioning	Automatic loading system with drip container for squeegee	
Min. substrate size	50 mm (X) × 40.5 mm (Y)	50 mm (X) × 40.5 mm (Y)
Max. substrate size	250 mm (X) × 400 mm (Y) (3-stage conveyor) 400 mm (X) × 400 mm (Y) (1-stage conveyor)	350 mm (X) × 510 mm (Y) (3-stage conveyor) 600 mm (X) × 510 mm (Y) (1-stage conveyor)
Machine dimensions	1000 mm x 1300 mm x 1600 mm (L × W × H)	1300 mm x 1500 mm x 1600 mm (L x W x H)

Options		
Automatic Smart Pin Support	30-pin magazine (4-mm and 12-mm pins)	50-pin magazine (4-mm and 12-mm pins)
DEK Paste Management	Automatic solder paste application with automatic paste roll height control	
Dual Access Cover	Hot-swapping of solder paste cartridges	
DEK All Purpose Clamping	Flexible and totally software-controlled vertical and lateral clamping	
High Flow Vacuum	Special large-area vacuum system incl. flexible tooling box – ideal for carriers	
Closed-loop link to SPI systems	Expanded solder paste control with ProDEK	

www.asm-smt.com

ASM Assembly Systems GmbH & Co. KG
Rupert-Mayer-Strasse 44 | 81379 Munich | Germany | Phone: +49 89 20800-27819 | E-mail: smt-solutions.de@asmpt.com

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