ASMPT enabling the digital world



Process Support Products

Essentials for highest yields



Machines & Software + Process Expertise + Tools & Materials +

ASMPT Enables Printing Excellence

Stable printing processes are critical for the quality and efficiency of your electronics production.

ASMPT is the only equipment manufacturer in the world that is able to offer everything you need for the stencil printing process: machines and software, consumables, stencils and toolings, process expertise, and smart process solutions. Only our teams of experts can adjust each component perfectly to provide you with the best solution available. The bottom line: only ASMPT guarantees printing excellence.



ASMPT
PRINTING EXCELLENCE

Smart Processes

Our printing solutions deliver maximum productivity, extreme accuracy, and ease of operation.

Excellent hardware with powerful yet easy-to-operate software – the trademarks of our DEK printing solutions. Users benefit from outstanding printing accuracy, high yields, and economic efficiency. Our DEK portfolio of printers features solutions for every type of production. With their modular design, DEK printers can be configured for any requirement.

Competent support from experienced process experts

Stable, optimized printing processes require more than good machines and materials – they require process expertise. The global ASMPT team has decades of experience in stencil printing. We gladly share this knowledge with your teams – in training seminars, workshops, and joint projects. Our application support is there when you need it – online, in our SMT Centers of Competence all over the world, or at your location.

Stencils, toolings and consumables for optimized processes

Printing processes are complex. The only way to achieve optimal results is by employing the right stencils, toolings and consumables. We are the only equipment manufacturer that can provide you with everything you need to optimize your printing processes.

State-of-the-art SPI solutions for total process control

Optical systems and sensors in our machines ensure closed-loop process controls and safeguard stable printing processes. As the industry's technology leader, ASMPT also counts on innovative technologies that offer an entirely new set of possibilities for process control and optimization.

With the WORKS Process Expert, we offer one of most precise and flexible SPI solutions on the market that raises your printing processes to an entirely new level.

Your partner for printing process optimization

Printing processes are complex. As the world's only manufacturer of printing solutions, we are by your side at every point in the process chain.

Machines and Software

Powerful, modular best-in-class printing platforms that can be optimally configured for any application and a wide range of production types with efficient and reliable operation thanks to state-of-the-art software.

- DEK NeoHorizon – maximum flexibility
- DEK TQ/DEK TQ L – maximum performance
- WORKS Printer Programming



Tools and Materials

Get the most out of your printing processes. With our Process Support Products (PSP) you optimally coordinate all process components for maximum efficiency and quality.

- Stencils
  - All Materials
  - All technologies
  - Single-/multi-level
  - Coated/uncoated
- Stencil frame solutions
- Smart Stencil lifecycle management
- Stencil storage systems
- Support solutions
- Consumables
- Squeegees





Process expertise

Benefit from the decades of process expertise we have accumulated in our global network of developers, application engineers and support technicians.

- SMT Centers of Competence
  - Testing/application support
- On-site training seminars and workshops
- Remote Smart Factory
- ASMPT Academy training portal



Smart processes

New technologies open up new possibilities. As the industry's technology leader, we are always at the forefront of making your printing processes future-proof.

- Process Lens (SPI)
- WORKS Optimization – our self-learning inline expert system for autonomous printing process optimization
- DFM HealthCheck



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Process Support Products

Make your processes the best they can be

To meet the steadily rising requirements on fine-pitch/ultra-fine-pitch production in the electronics field, you must continuously improve your printing processes – your printers, printing parameters, stencils, tools, and consumables.

To do this, electronics manufacturers have a unique partner in ASMPT, because our brands stand for more than technologically leading printing and placement solutions. We are the world‘s only equipment supplier that also develops and delivers process support products (PSP) ranging from stencils, tools and consumables to cleaners and fabrics to boost your manufacturing processes.

Everything from a single source – with our extensive PSP portfolio we help operators and process engineers improve the yield and productivity of their printing processes and SMT lines. We have knowledgeable experts who work with your team to optimize printing processes, as well as a broad portfolio of tools and consumables that help you to get the most from your equipment.

This applies not only to ASMPT‘s own DEK printing platforms. Equipment from other companies can also deliver peak performance with ASMPT process support products. And as part of ASMPT, the world‘s largest equipment supplier to the electronics industry, we are present globally – with logistics centers, sales offices, personalized support, and process consultants for all our process support products. This makes it possible to run simple and standardized purchasing and support processes in all locations.

Our tip: Eliminate unstable printing processes and frequent interventions that jeopardize the productivity of your lines. Talk with our process experts and find out how you can improve the yield and speed of SMT production with process support products.

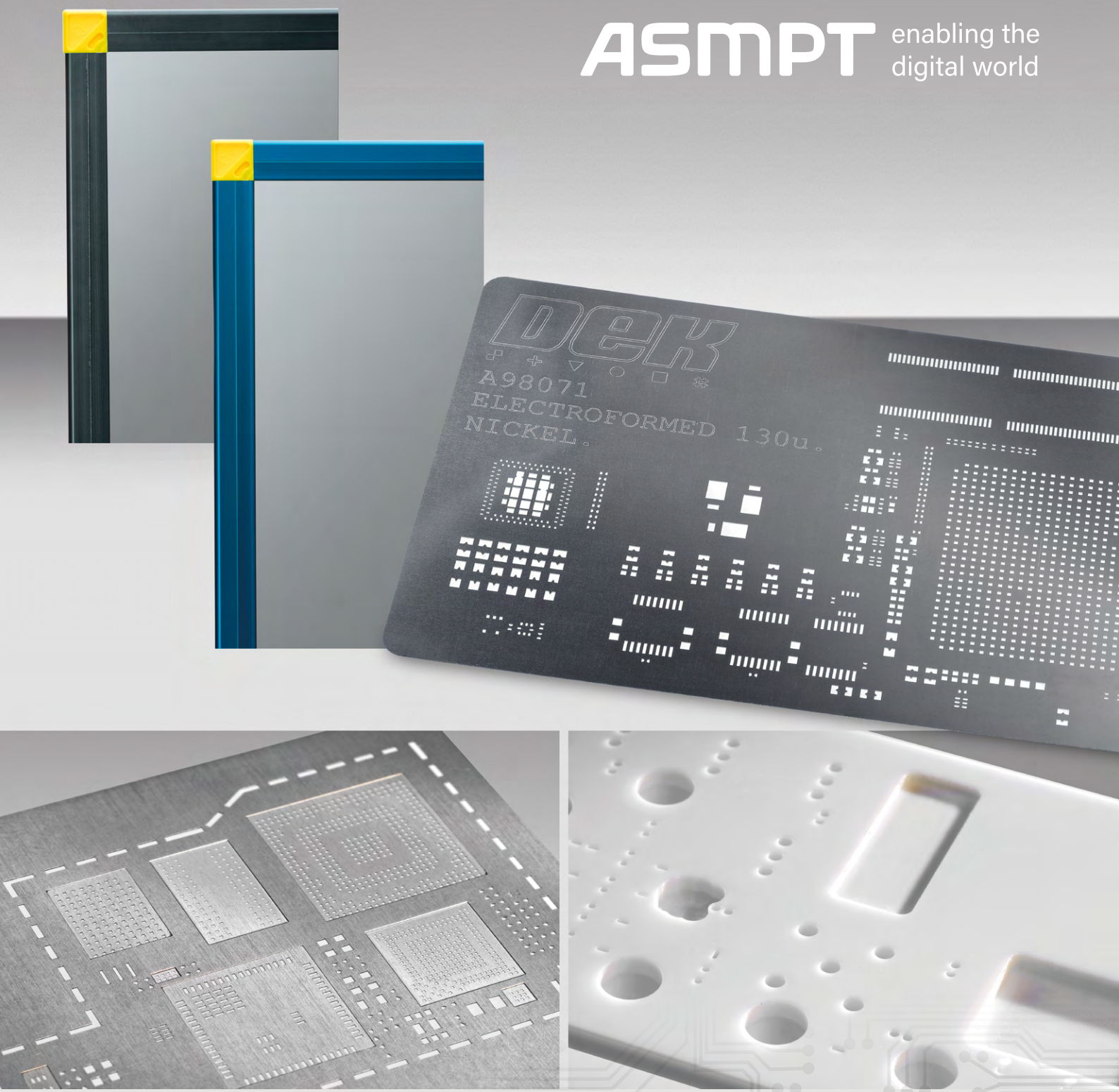
Process Support Products
Webshop





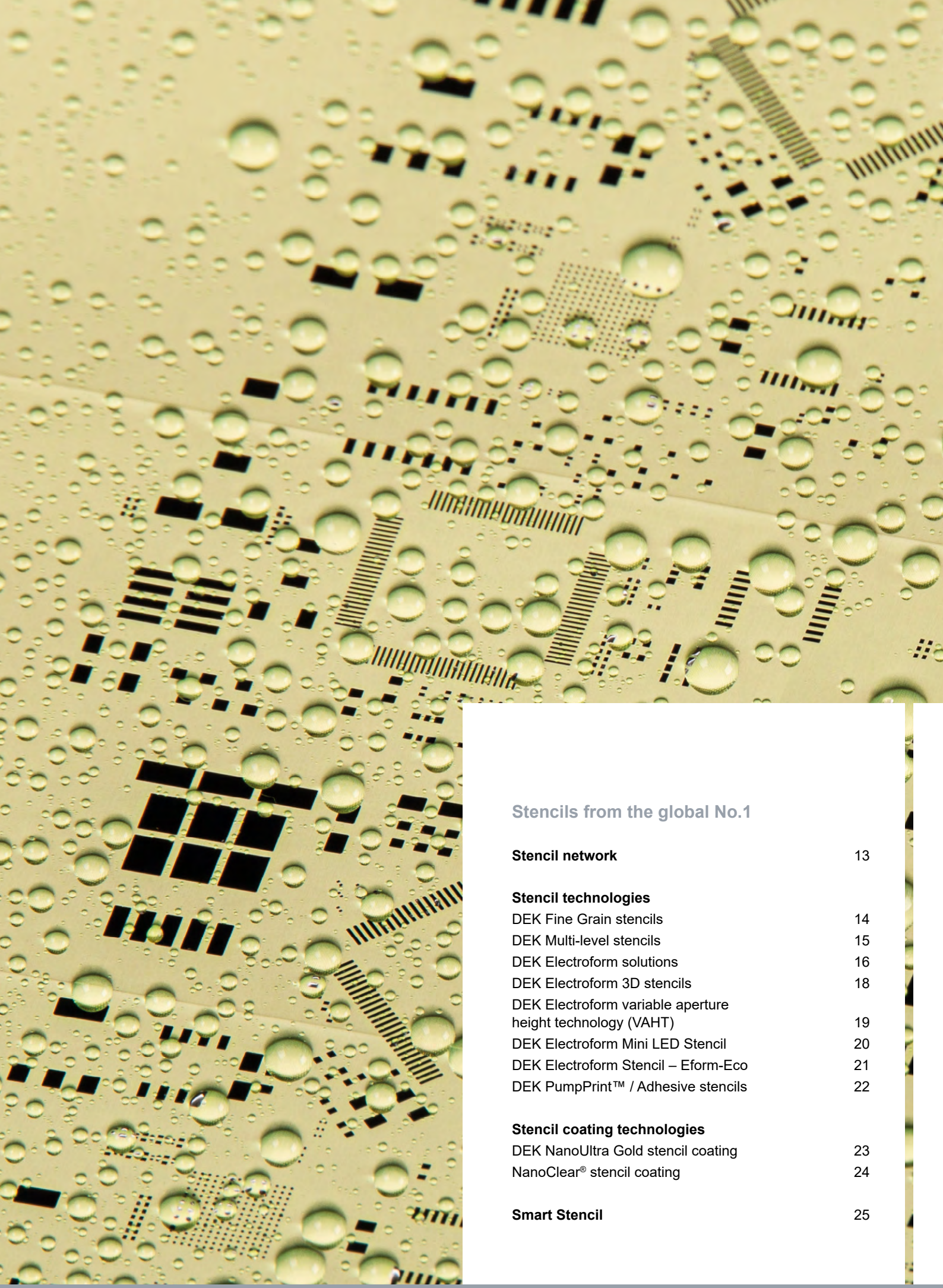
smt.asmpt.com/en/myasmpt/webshop

ASMPT enabling the digital world



Stencils from the global No. 1

Improving the print process and boosting throughput



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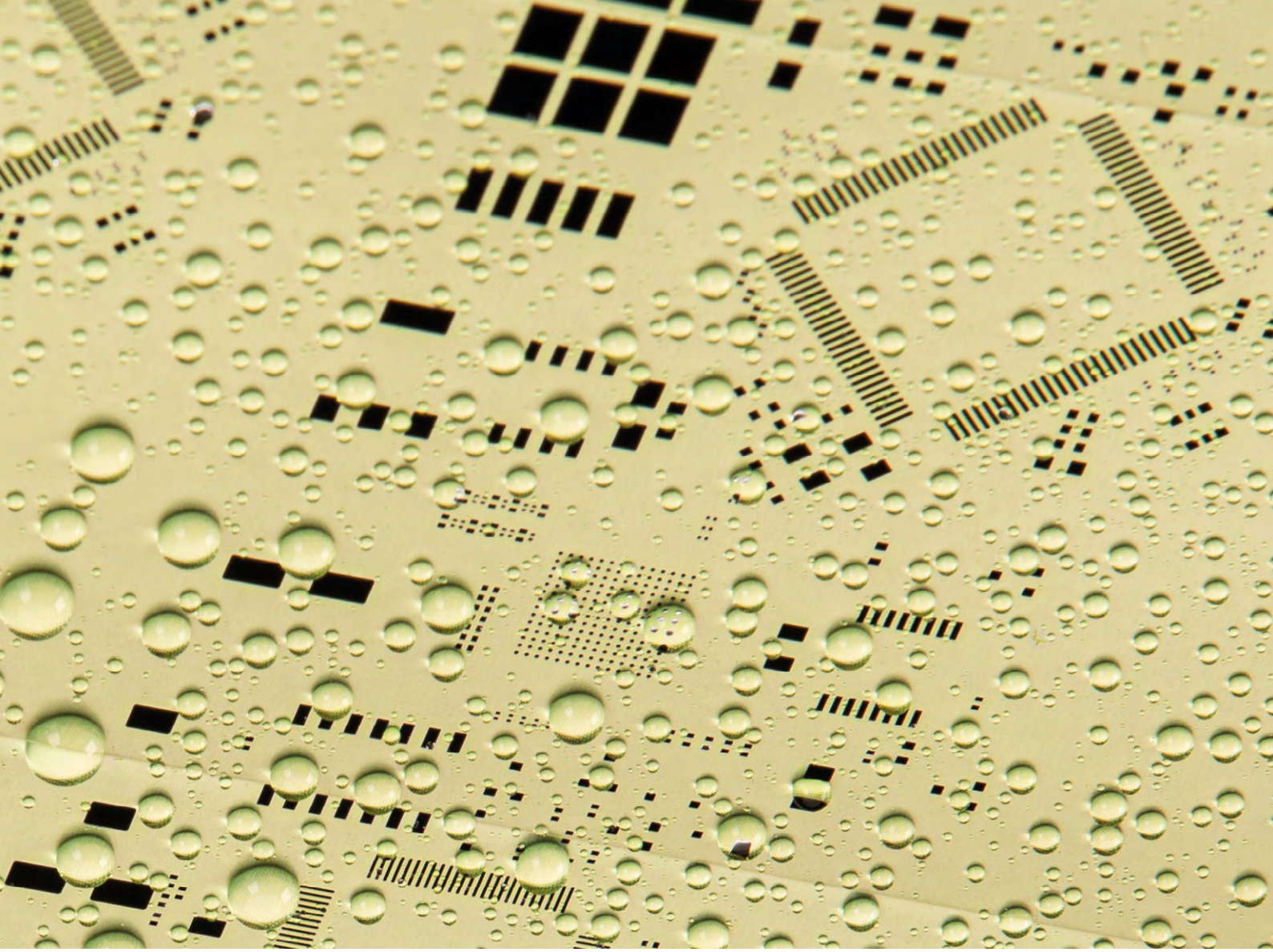


Stencils for all your printing needs

Stencil technologies

As the world’s largest supplier of stencils for industrial printing processes, ASMPT is the right partner at your side. The quality of the stencil is a critical factor in the printing process. Stable and cost-effective printing processes can only be achieved with materials that are precisely manufactured and extremely resilient. ASMPT produces stencils with a wide range of technologies – from classic laser cutting to high-precision electroforming, and from single level to multi-level stencils. The broad portfolio of our award-winning stencil and frame solutions features perfectly coordinated high-quality products for all requirements ranging from standard SMT applications to the production of the most complex modules.

Stencil coatings

DEK NanoUltra coatings deliver dramatic improvements in the release behavior of solder pastes. To achieve this, we coat the aperture walls and/or the underside of the stencil with a thin, flux-repellent material. This improves the solder paste transfer and delivers more stable printing processes for fine-pitch applications while minimizing paste and flux residues on the stencil. Stencils with DEK NanoUltra coating must be cleaned much less frequently. This saves time and money in the stencil printing process.

Smart Stencil: RFID-based lifecycle control

A stencil's tension and surface quality decline as it is being used. These aging effects reduce the quality, yield and stability of the printing process. Smart Stencil is our unique, RFID-based all-in-one solution for monitoring stencil lifecycles. RFID tags on the stencils – provided by ASMPT for stencils from any supplier – record and store the number of print cycles, while DEK printers with Smart Stencil readers report when each stencil's adjustable warning or maximum number of print cycles has been reached. You can’t make printing any smarter.

Stencils from the global No. 1

ASMPT is the world's largest manufacturer of stencils for industrial printing applications as a result of the high quality and reliability of our products and services. All of ASMPT's factories and partners in the global stencil network operate with the same materials, the same equipment, and in accordance with strictly certified procedures. This enables us to supply our customers quickly and with consistently high quality – no matter where they may be located.

Consulting

The worldwide network of ASMPT offices, service centers and partners guarantees close proximity, quick responses, and fast, competent help on site.

Application support

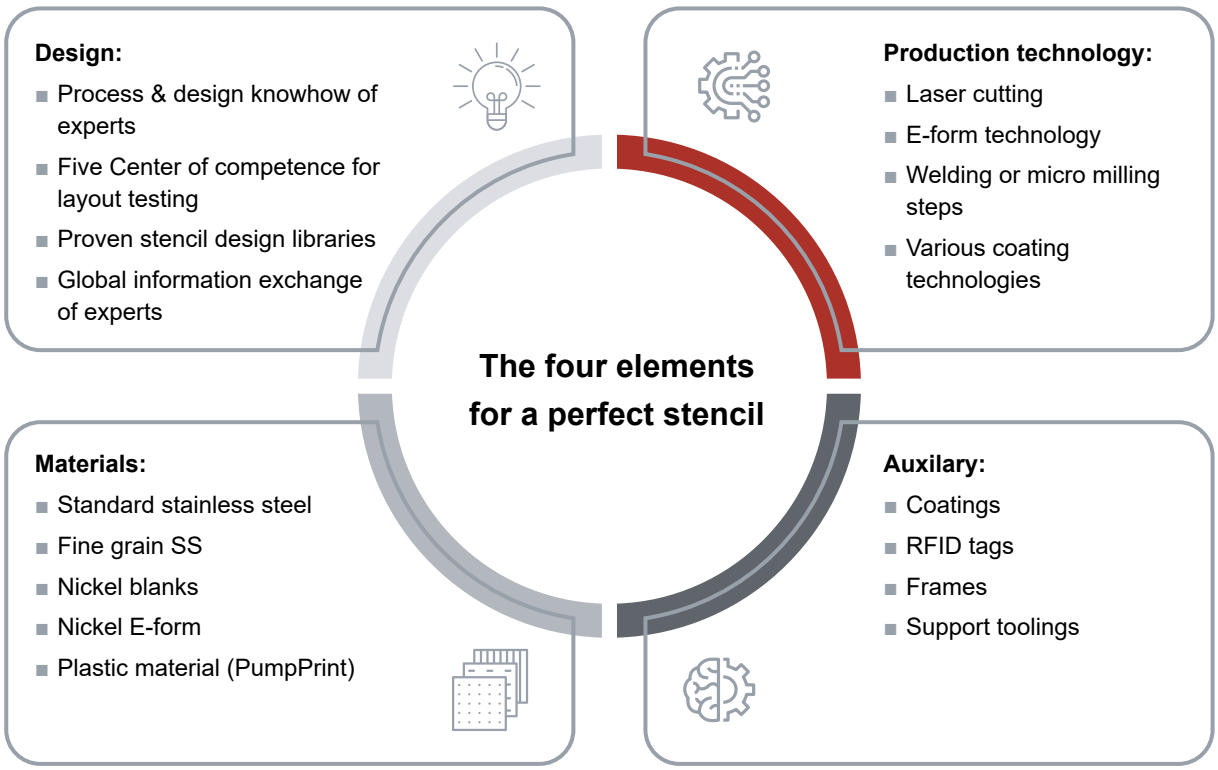
Only ASMPT as the global SMT technology leader can offer printing process expertise with this depth and quality. In our five SMT Centers of Competence (CoCs) spread around the world we provide application support, check designs, offer improvement workshops, and simulate and test specific printing processes in a realistic environment. Our experts stand by you in person or remotely, and always in close contact with your local ASMPT partners.

Convenient ordering, fast delivery

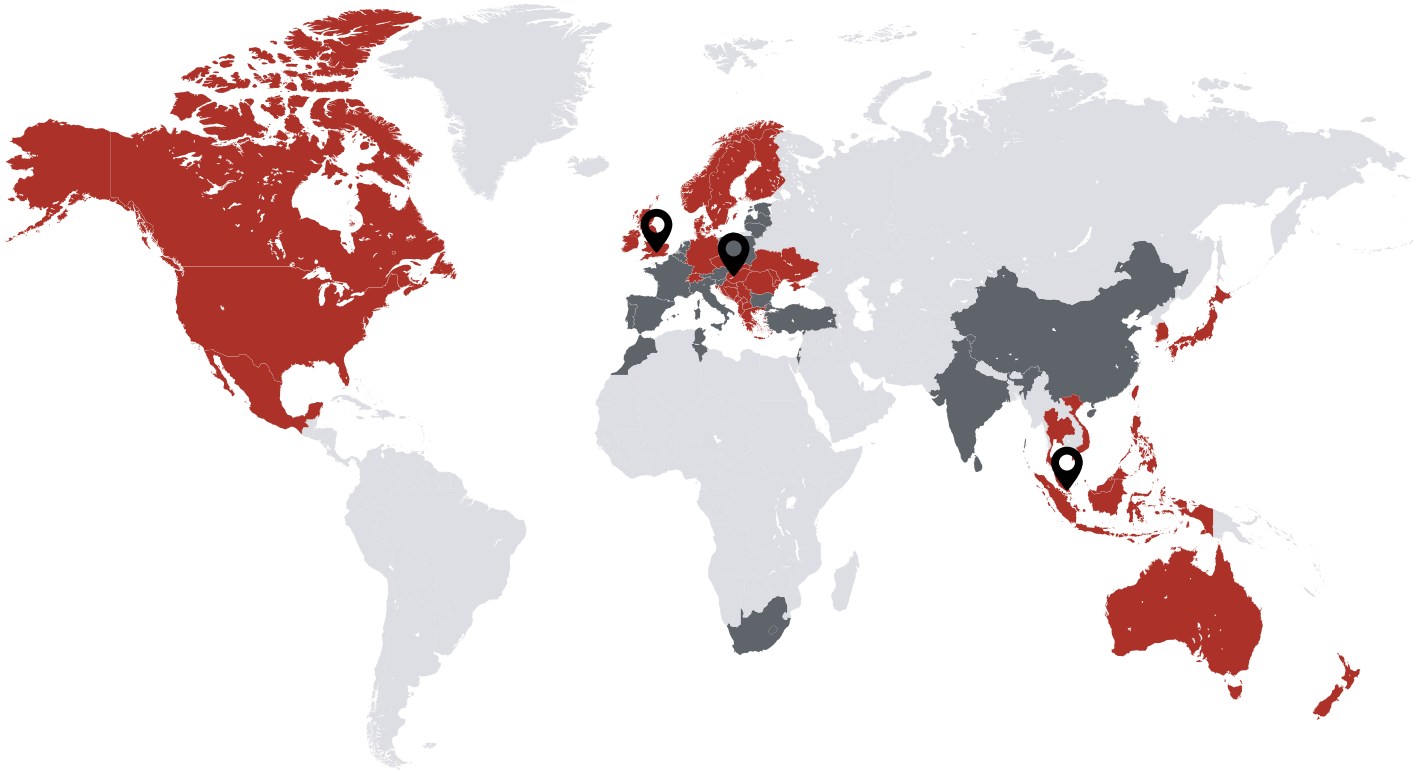
You can place your orders the way your prefer – the classic way via your local representative or electronically via the ASMPT Web Shop that is open 24/7. Either way, we guarantee speedy shipment – up to our Premium Rush Service with its 4-hour delivery time.

DFM HealthCheck

With this pioneering process, state-of-the-art expert system and big data technologies are used to run virtual prints in order to analyze your stencil data, identify critical areas, and make concrete proposals for optimized printing process settings. Based on this information, you can print right away, eliminating the need for time-wasting NPI test runs.



Stencil network



ASMPT stencil operations

EUROPE
- Györ (Hungary)
- Weymouth (England)

ASIA
- Singapore

ASMPT direct support

Stencil partner network



Real-life SMT lines in the SMT Centers of Competence are used to provide application support and run tests including SPI analysis.



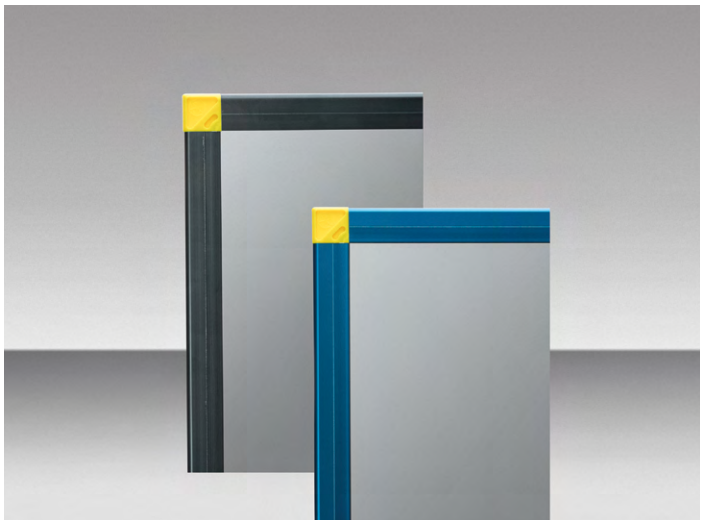
Tests in labs featuring modern equipment confirm the high quality of ASMPT stencils.

Stencil solutions – stencil technical specification

LASER CUT STENCIL						
	Standard PHD stainless steel	**Laser cut nickel**	**Fine grain stainless steel**	**Standard E-form nickel**	**Platinum E-form stencil**	**Wide fine grain stainless steel**
Material type	304 PHD	Nickel	Fine grain SS	Hard nickel	Hard nickel	Fine grain SS
Material hardness (HV)	≥370	>470+	≥370	500 +/-50	500 +/-50	≥370
Grain size (µm)	5-10	1	2-5	1	0.6	2-5
Thickness available (µm)	50-500	100-175	50-250	75- 200	20-230	80-200
Thickness tolerance	2%	7%	2%	10%	<5%	4%
Area ratio window	>0.66	>0.6	>0.55	>0.5	>0.5	>0.6
Sheet width max	690.9 mm	584 mm	610 mm	610 mm	584 mm	690.9 mm
Apertures size tolerance	±5 µm	±5 µm	±5 µm	±10 µm	±4 µm	±5 µm

DEK Fine Grain stencils

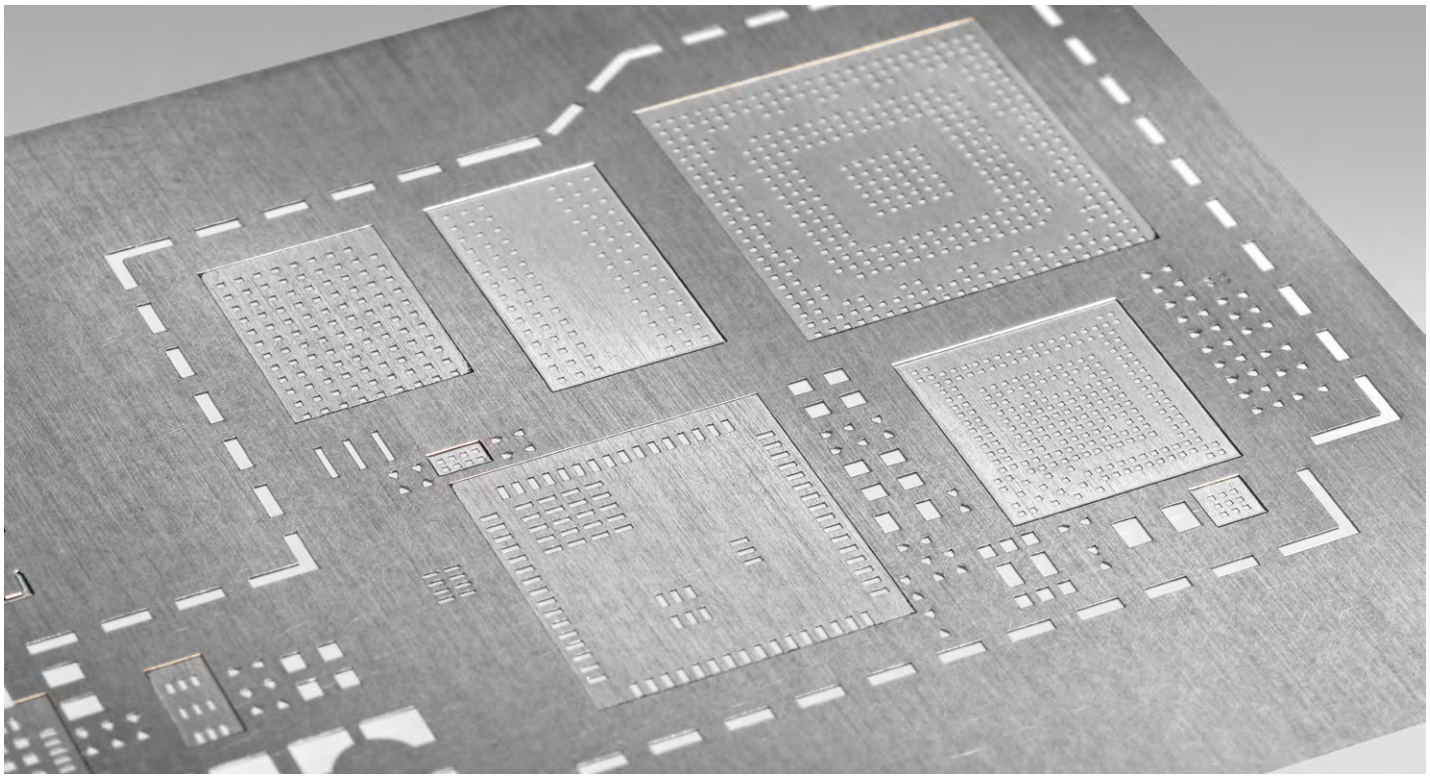
Achieving a finer grain of stainless steel, DEK Fine Grain stencils provide superior paste release and a smoother stencil surface.



DEK Fine Grain stencils can be used with the DEK Mesh-mounted frames, DEK VectorGuard™ Classic and DEK VectorGuard™ High Tension frame systems. Fine grain stainless steel stencils provide smoother laser-cut aperture walls for improved paste release and better material transfer efficiency. A cost-effective alternative to nickel, fine grain stainless steel is ideal for challenging dimensions and high-density assemblies.

DEK Multi-level stencils

Ideal for ensuring optimized solder paste height and volume for components that are distributed over a wide area, DEK Multi-level (step) stencils are produced with the latest micro-milling technology to ensure exceptional accuracy and repeatability.



DEK Multi-level (step) stencils are available in stainless steel or nickel and are ideal for printing paste on SMT boards with fine pitch parts arranged over a large area. These stencils provide excellent print performance for applications with micro BGAs, 0.3 mm QFPs and small components such as 0201s metric, as well as packaging applications and release of specialty solder paste formulations

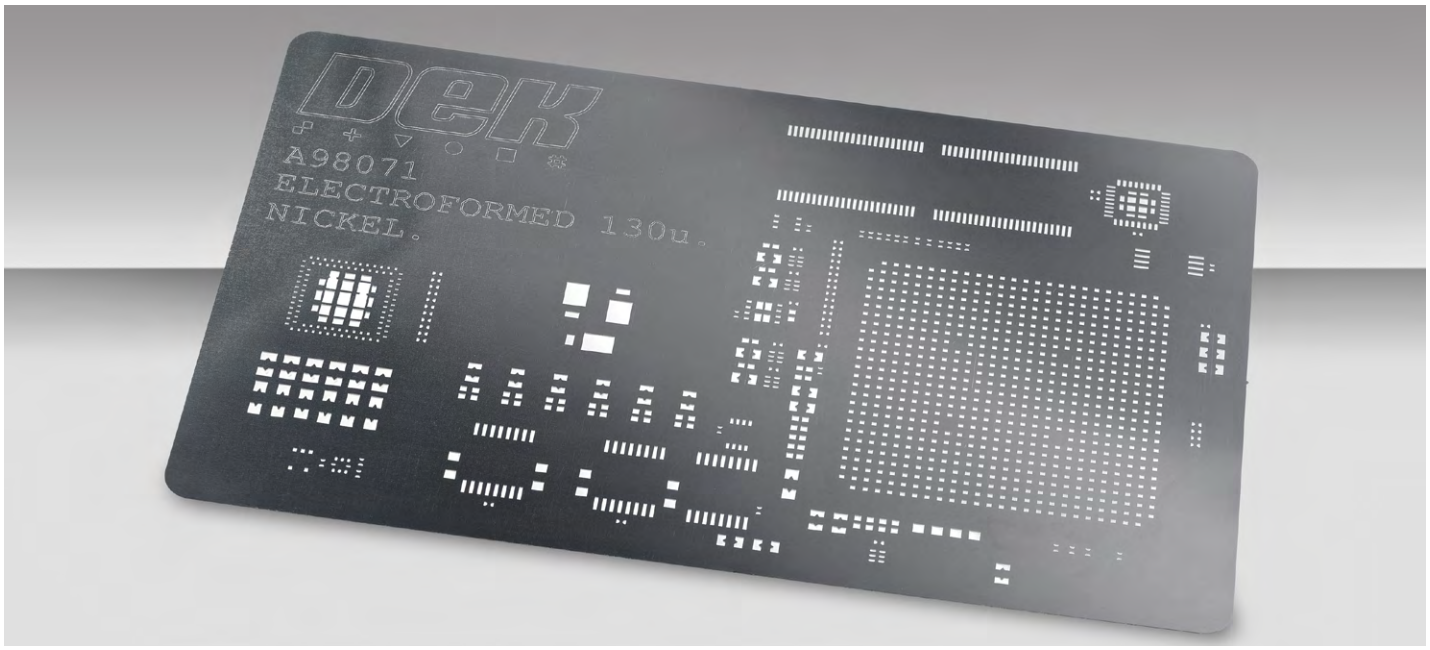
Multi-level stencils are available mesh mounted onto industry-standard frames and are available for the DEK VectorGuard™ Classic and DEK VectorGuard™ High Tension frame systems.

Benefits:

- Flexible local adaptation to any component mix
- Maximum positioning accuracy
- Improved solder paste homogeneity
- Improved repeat accuracy thanks to extra-smooth surface structure and high-precision edges
- Minimized paste wastage through optimized surface structure
- Significant reduction of paste residue in shadow areas
- Flexible design of pressure-sensitive areas
- Significant squeegee pressure reduction thanks to a modified ramp profile

DEK Electroform solutions

Achieve ultimate material volume consistency control for standard SMT, micro-SMT, semiconductor, solar and LED lighting applications with DEK Electroform stencils.



Singapore Center of Competence

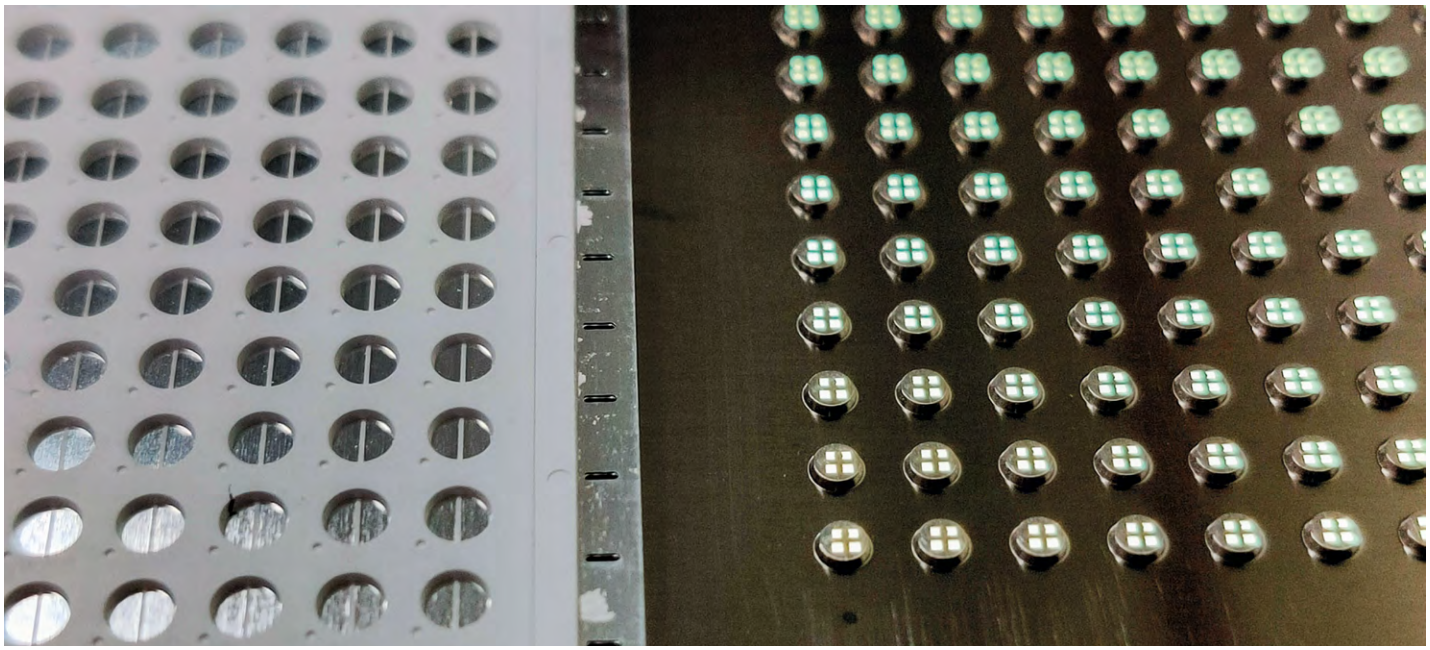
To develop new manufacturing processes such as electroplating solutions for stencils, ASMPT operates a center of competence in Singapore with its own nickel electroplating facility. The local team has many years of experience and deep expertise in the production of electroformed stencils and parts for non-SMT components. The stencil designs are developed and tested in the adjacent application center.

By providing maximum control over the thickness and evenness of stencils, ASMPT's electroforming technology ensures ultimate consistency for many standard SMT, micro SMT, semiconductor, solar and LED applications. With material thicknesses down to 12 microns, the material can be adapted to meet any current and future requirements. In addition, electroforming technology offers the possibility to manufacture specialized components in large volumes, thus reducing their unit cost.

Made with an additive galvanic process, DEK Electroform stencils can be produced with extremely complex designs to enable the printing of exceptionally small deposits in recesses, around components, or on multiple levels. In many applications, electroformed stencils are clearly superior to stencils produced with traditional dispensing or spray coating techniques by delivering more throughput per hour and improved performance.

Features and benefits:

- Min thickness: 12 µm to 200 µm
- Min stencil size:
  DEK VectorGuard™ 584 mm × 584 mm (23″ × 23″)
- Max stencil size:
  DEK VectorGuard™ 584 mm × 736 mm (23″ × 29″)
  DEK Mesh-mounted frame solution 736 mm × 736 mm (29″ × 29″)
- No additional costs for large quantities of apertures
- No deformation of stencil like lasering of large quantities of apertures like for wafer bumping
- Test and development support for new projects



3D printing

Applications:

- Semiconductor packaging
  - Wafer and substrate bumping
  - Ball placement
  - Leadframe printing
  - Low-Temperature Co-fired Ceramics (LTCC)
  - Die attach

- LED Printing
  - LED leadframe printing
  - Flux printing for flip-chip mounting
  - Phosphor layer printing on wafer die or over flip chip die
  - Piece parts

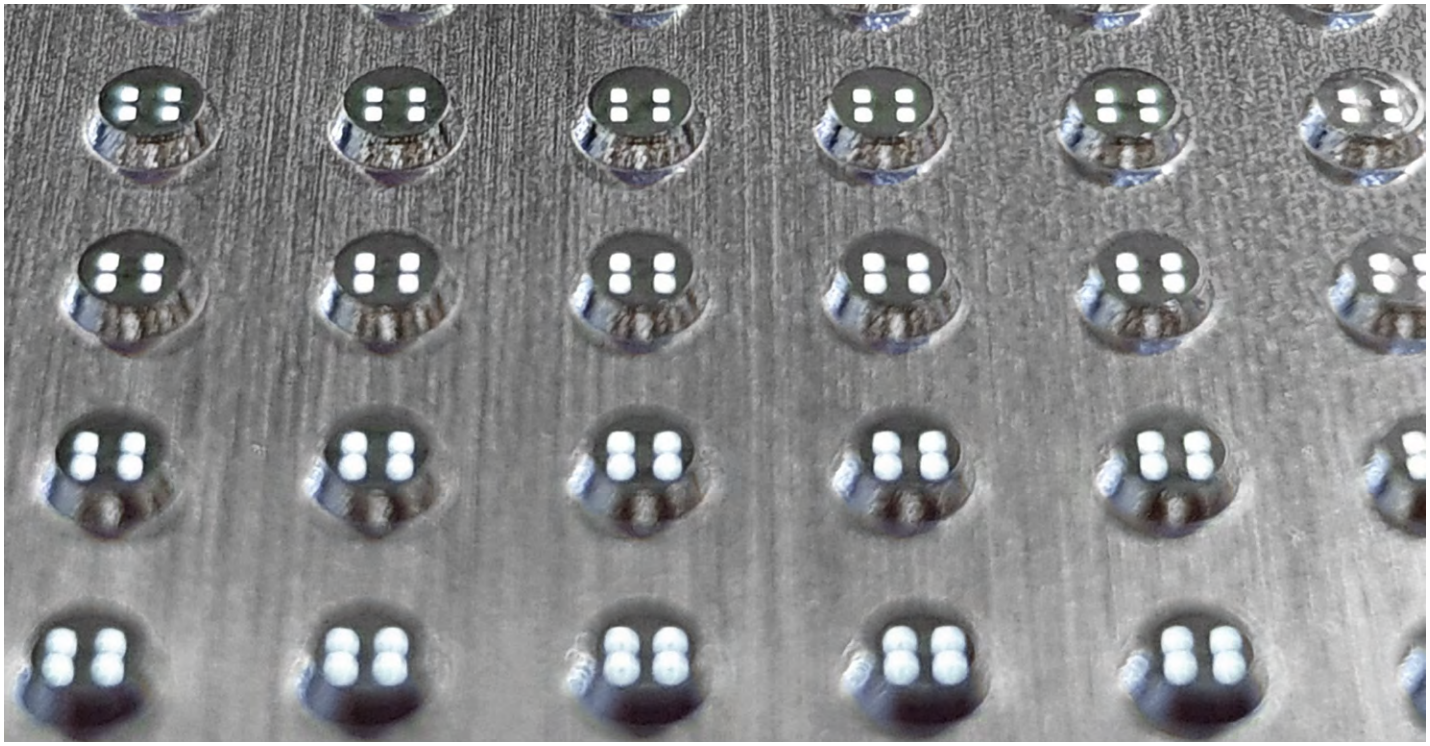
- 3D printing on wafers, substrates

- Surface-mount assembly
  - Standard SMT printing
  - VAHT stencils – variable height on different apertures
  - 3D stencils – print apertures on different levels; cover components and print around the covered area

- Piece Parts
  - Electrical test probes
  - Electro-mechanical parts
  - Multiple other parts such as foils and sieves

DEK Electroform 3D stencils

DEK Electroform 3D stencils ensure highest print quality and throughput for jobs that require printing with different height levels and into indentations.



DEK Electroform 3D stencils are single thickness stencils produced to accommodate mass imaging of surfaces that are not flat or include features or structures that would prohibit conventional one-pass printing.

Well-suited for printing inside cavities or cover printing on pre-populated substrates, 3D stencils allow higher throughput and lower costs through the elimination of secondary printing or dispensing steps.

Benefits:

- Enables single pass printing for challenging, non-flat or pre-populated substrates
- Lowers cost by eliminating traditional secondary printing or dispensing steps used to accommodate positive or negative Z axis values
- Improves production throughput
- Can be manufactured to conform to any shape or topography
- Better uniformity and deposit shape control than with dispensing processes

Specifications:

- Special, (usually) supplied slotted squeegee required
- Proven for a variety of different applications
  - LED cavity printing
  - SMT multi-level printing
  - SMT ceramic substrate cavity printing
  - Semiconductor printing to accommodate wafer embossment
  - Semiconductor die top printing
- Stencil frame size: DEK VectorGuard™ Classic or DEK VectorGuard™ High Tension 23″ × 23″ recommended
- Stencil foil thickness: 50 µm - 250 µm (2 mil-10 mil)
- Pocket size: 1.0 mm square (min)
- Pocket depth: 2.0 mm (max, depending on pocket size)
- Pocket to pocket gap allowance: 2.5 mm (min)

DEK Electroform Variable Aperture Height Technology (VAHT)

DEK VAHT technology offers a unique alternative to multi-level stencils for non-homogeneous assemblies that call for larger, area-specific paste volumes to accommodate bigger components.



Electroform stencils can be produced with modifications to accommodate specific applications. One such adaptation is a technique called Variable Aperture Height Technology (VAHT), whereby a gasket overgrowth is created around apertures to create more aperture height to allow for increased paste volumes to be deposited.

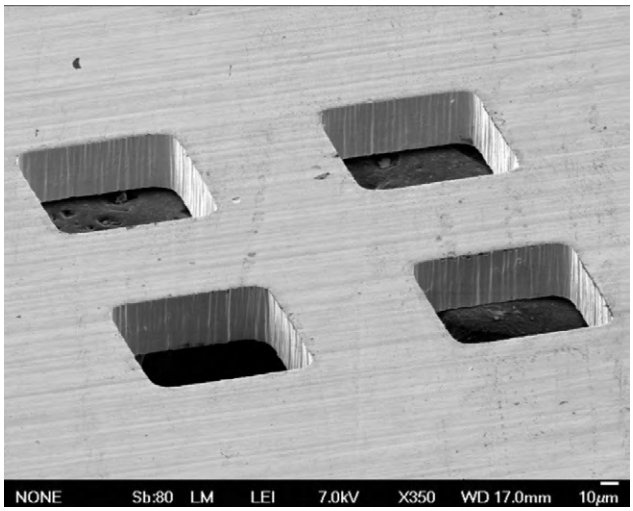
VAHT is ideal for PCBs that incorporate both small and large components that require varying amounts of solder material. Aperture gasket height can be 1 to 2 mils higher than the base stencil thickness.

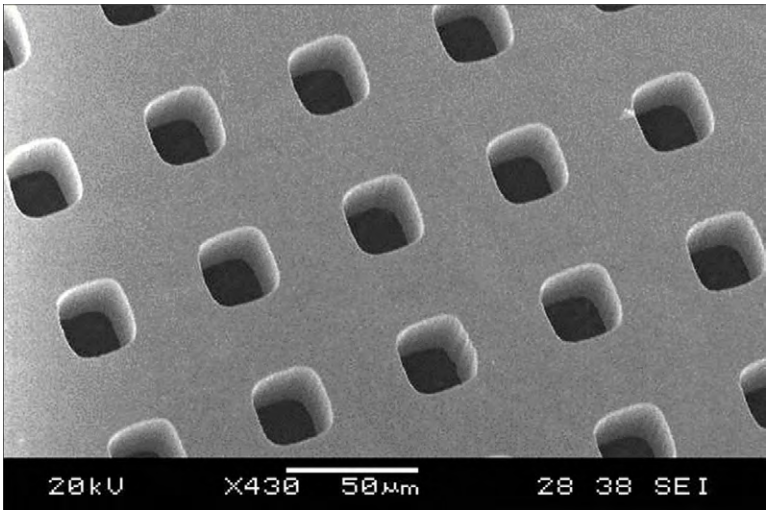
Benefits:

- Ideal for heterogeneous assemblies, allowing printing of various solder paste volumes with a single stencil
- Improved throughput

DEK Electroform Mini LED Stencil

Miniaturization trend demands stencil with smaller apertures.





In recent years, miniLED has emerged as a new segment with high growth potential and has drawn the interest of most major LED companies. miniLED are used in the back-light units (BLUs) of display screens and are very competitive both in terms of cost and function, offering excellent contrast though the use of local dimming. However, miniLED products pose a real problem to the packaging industry which has not yet developed solutions for handling such small dies with the accuracy and throughput required; a typical miniLED die is smaller than an 0201m component.

The challenges related to stencil printing for miniLED products involve printing paste deposits which are smaller than 100µm in size and controlling the uniformity of the paste deposits to avoid die tilt, bridging and other defects. Electroform is uniquely positioned to address these challenges. Electroformed stencils have better paste release capabilities, a result of the superior smoothness of the aperture side wall and the surface energy of nickel.

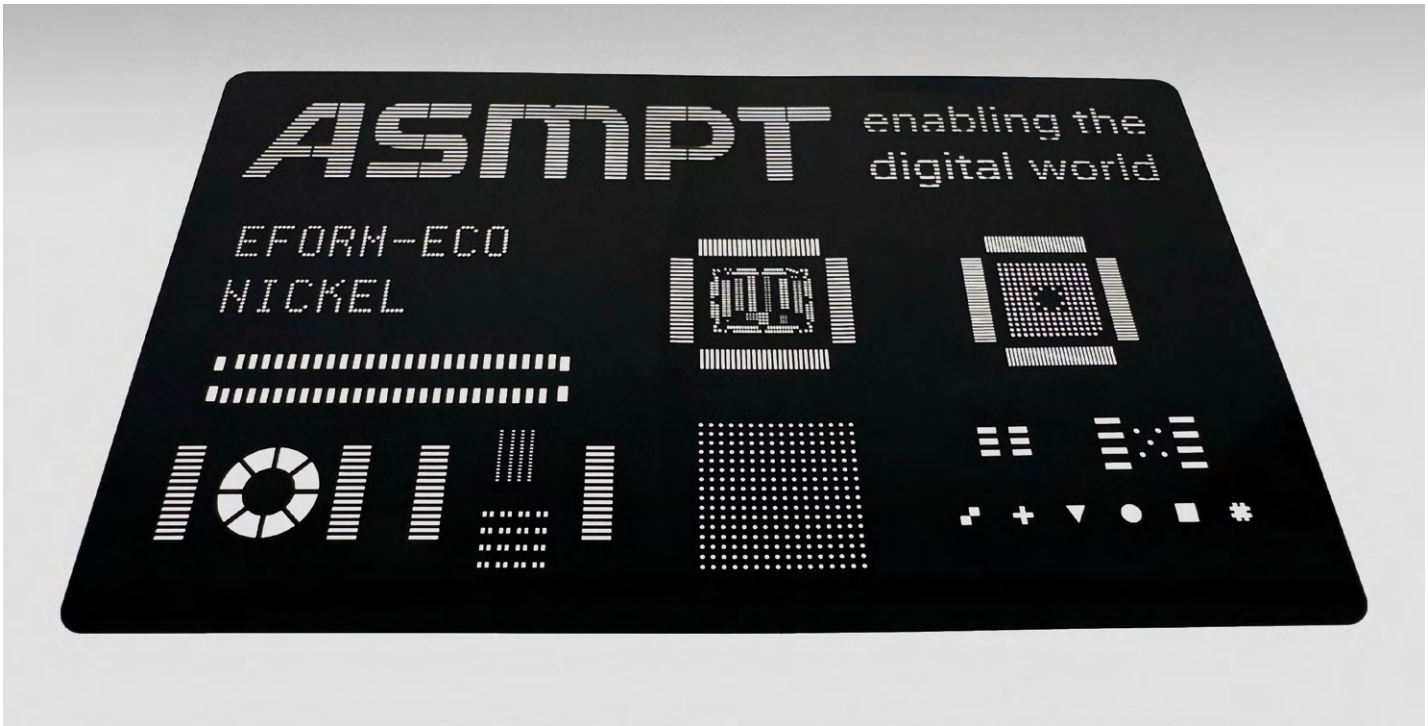
In addition, miniLED products using RGB configurations typically require more than 100,000 apertures in one stencil as well as a stencil thickness in the range of 23 – 40 µm. Laser cut stencils are not able to meet such requirements.

Specifications:

- Aperture Size: 50 µm × 50 µm (minimum), ± 4 µm
- Thickness: 23 µm (minimum)
- Gap between apertures: 50 µm (minimum)
- Frame Size: DEK VectorGuard™ 23″ × 23″
- Positional Accuracy: 0.1 µm/mm

DEK Electroform Eco stencil

Improving print process yield for SMT with optimum costs.



Understanding and addressing common printing process defects in SMT are essential for maintaining high-quality electronic manufacturing. DEK Electroform Eco stencil offers smooth aperture wall compared to most fine grain (FG) material. With superior hardness value at 500 HV, which translate into extended stencil lifespan and cost savings.

Nickel is the preferred and desirable material for stencil manufacturing due to its superior properties in durability, chemical resistance, low surface energy which enhance paste release capabilities and reduce under stencil cleaning frequency.

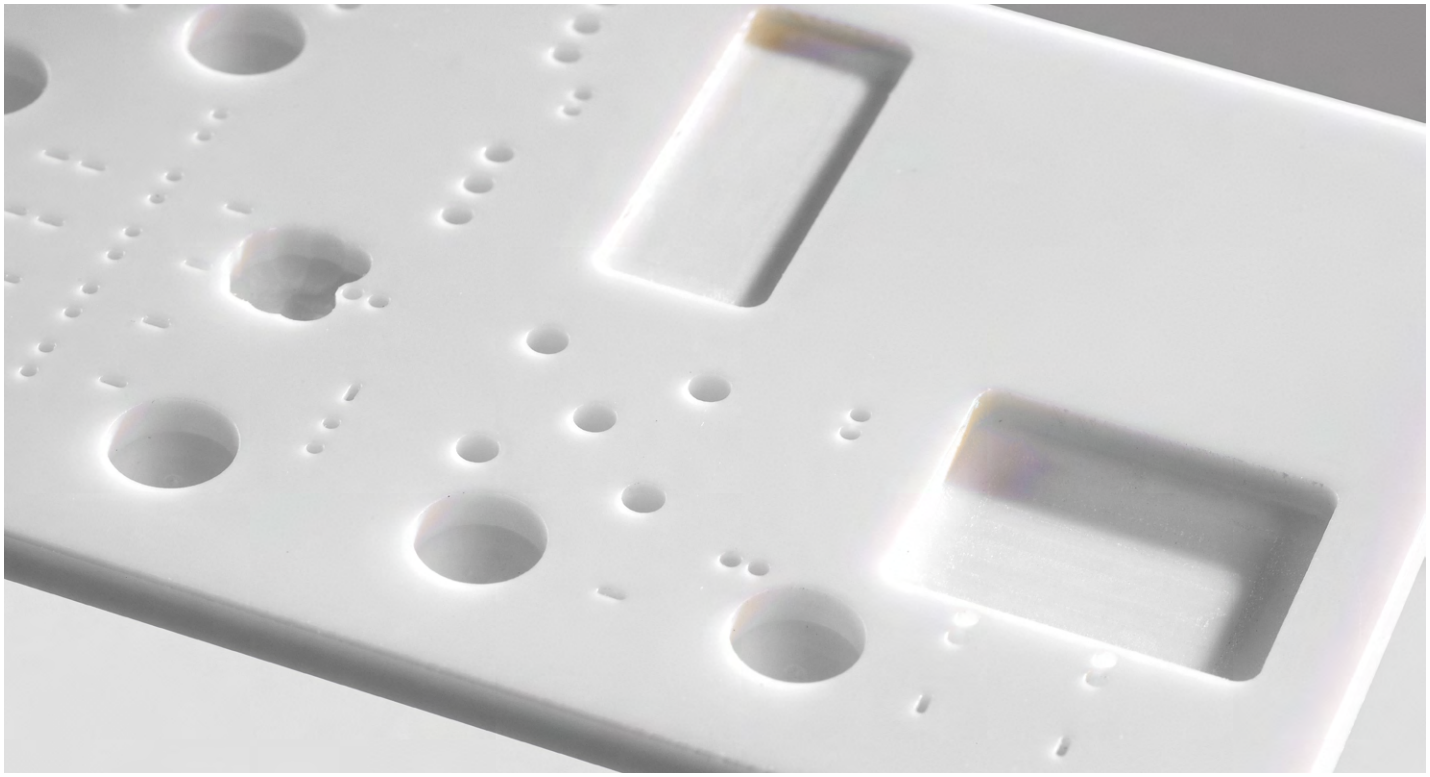
The DEK Electroform Eco stencil is uniquely positioned to address the gap between typical FG laser cut stencil and premium electroformed stencils, offering unmatched capabilities to meet high expectation of turnaround time and quality for SMT industry.

Spezifikationen:

- Area ratio ≥ 0.58
- Thickness: 3 mil to 6 mil
- Minimum aperture: 75 µm

DEK PumpPrint™ / Adhesive stencils

DEK PumpPrint™ technology enables a wide range of adhesive patterns to be successfully deposited using a screen printing platform.



DEK PumpPrint™ / Adhesive stencils enable deposition of adhesives in a single stroke, as opposed to the slower, serial process of dot dispensing systems. With adhesive printing, throughput is dramatically increased and cycle time is constant. Also effective for certain solder applications, DEK PumpPrint™ stencils can be utilized for solder deposition around through-hole component leads or into the base of deep packages.

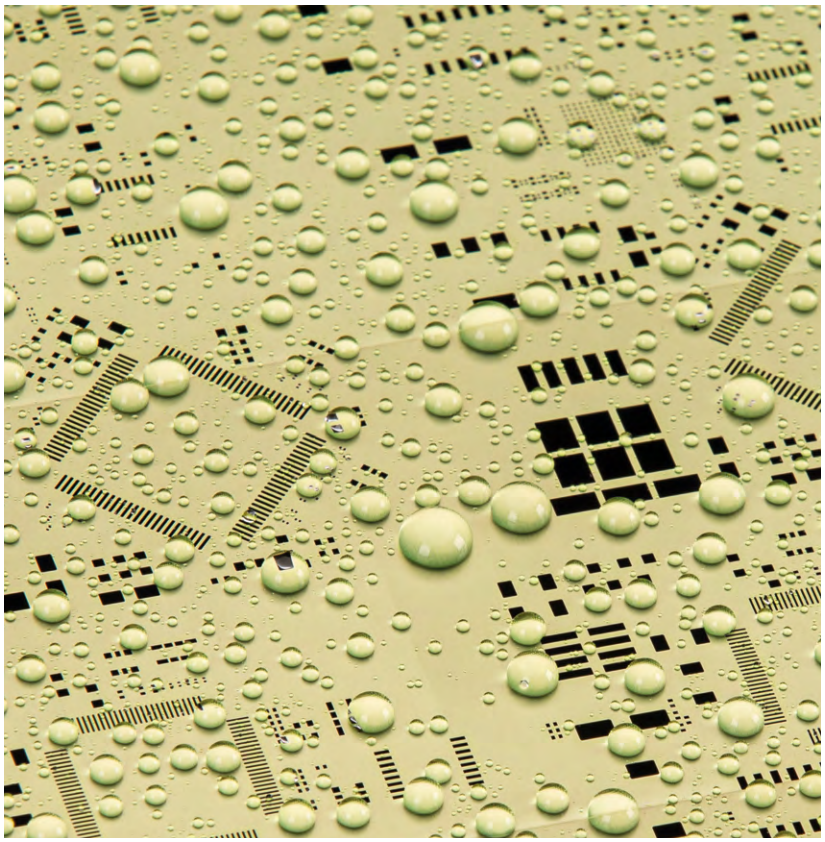
DEK PumpPrint™ / Adhesive stencils are constructed of an acrylic material and available in standard thicknesses of 1.0 mm to 3.0 mm, or up to 8 mm for special applications. Printing through accurately machined apertures, deposit heights from 75 µm to 1 mm can be achieved. Specially designed DEK PumpPrint™ stencils are also available for use with the DEK VectorGuard™ Classic stencil frame system.

Features and benefits:

- Significantly improved throughput, efficiency, and flexibility compared to traditional adhesive dispensing
- Nozzle changeovers eliminated
- Allows re-deployment of existing resources
- Underside routing clears components, cut and clinched through-hole leads, paste and solder mask
- Stencils are lightweight and solvent-resistant
- Available for the DEK VectorGuard™ Classic stencil frame system

DEK NanoUltra Gold stencil coating

Applied upon completion of the stencil manufacturing process, DEK NanoUltra Gold fluxophobic stencil coatings deliver stencil underside and aperture coating for maximum material transfer efficiency and optimized understencil cleaning performance.



Benefits:

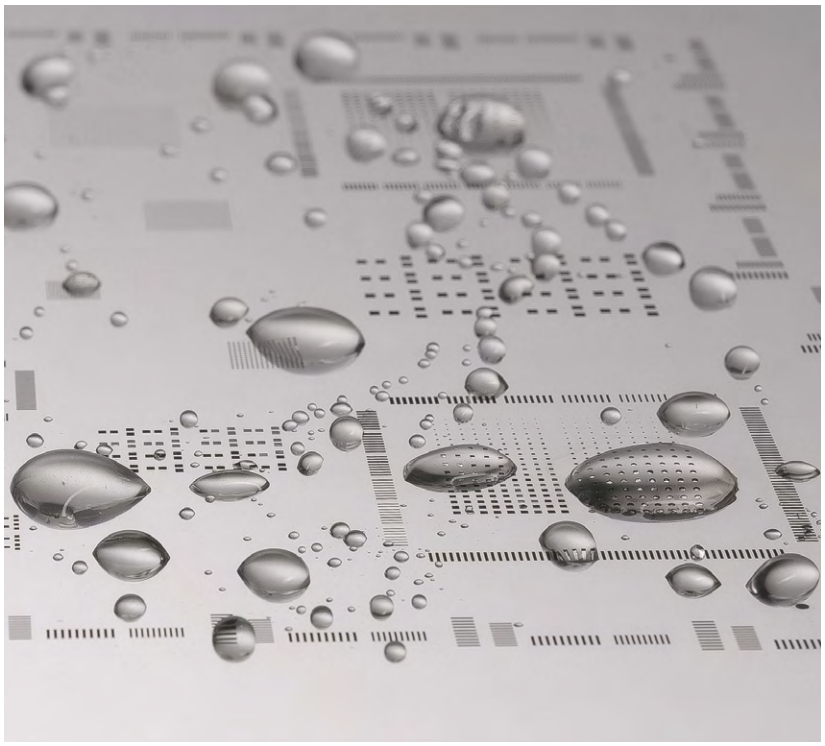
- Very long life cycle
- Coating applied to the bottom surface of the stencil and to the aperture walls for optimized print performance
- Significantly reduces understencil cleaning frequency requirements, lowering costs and improving throughput
- Delivers superior print definition for area ratios below 0.6
- Increases transfer efficiency by 10% to 40% depending on area ratio
- Reduces solder paste bridging
- Encourages more uniform solder paste deposits
- Colored coating provides visual confirmation of coverage, as opposed to clear wipe-on nano coatings
- Micron-thick coating lasts longer compared to wipe-on nano solutions
- Non-ionic, not conductive, and chemically inert
- ECHA REACH, RoHS and RoHS 2 compliance
- Recommended stencil materials: Fine Grain and stainless steel

TECHNICAL SPECIFICATIONS	
Properties	**Values**
Appearance	Gold
Thickness of coating	3 to 4 micron
Specific gravity @ 25C	1.02 g/cm^3
Static contact angle, water	105°
Static contact angle, n-hexadecane	64°
Abrasion resistance, ASTM D2486, isopropyl alcohol	>2000 cycles
Abrasion resistance, ASTM D2486, IPA based flux	>2000 cycles
Pencil hardness	>9H
Resistivity	>10 × 10^{12} ohm-M
Ionic residues (ROSE)	0 µg of NaCl / liter
Ionic species on board (as received)	None detected
Ionic species on board (after reflow)	None detected

DEK NanoUltra STENCIL COATING		
Part number		**Description**
SAP	**DEK**	
03178413	800109	Europe
03137312	800110	Americas

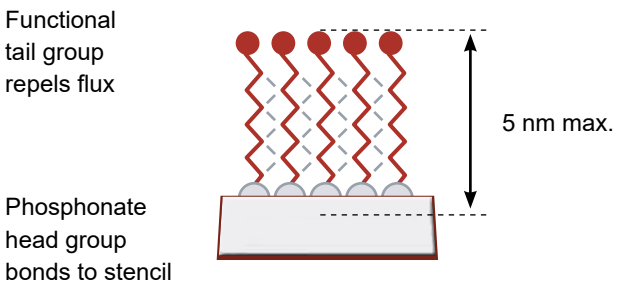
NanoClear® stencil coating

Self-applied fluxophobic stencil coating technology delivers high performance stencils in a cost-effective wipe. Designed to overcome the challenges of smaller aperture sizes, the NanoClear® coating offers a unique solution to improve cleaning effectiveness and reduce cleaning frequency.



Features and benefits:

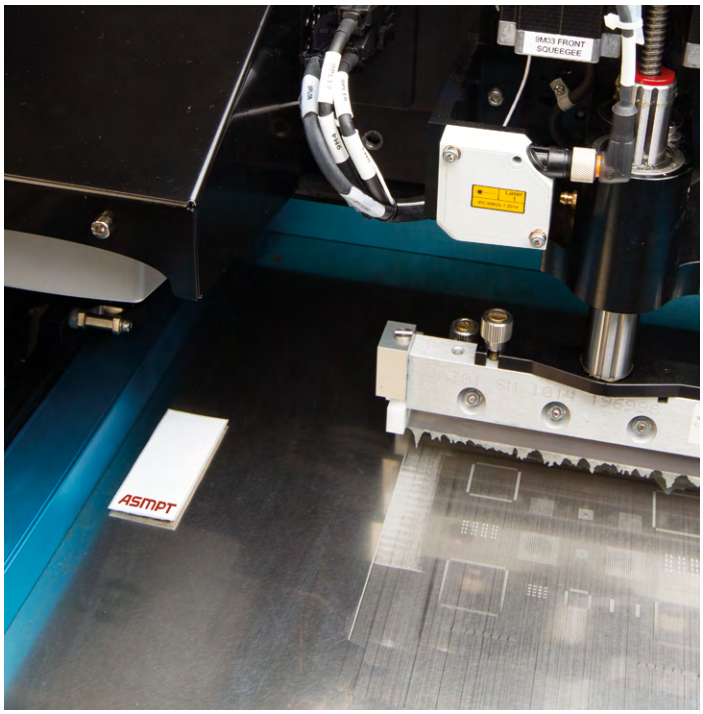
- Increases efficiency
  - Reduces the frequency of cleaning
  - Allows time for more production or SPI
- Reduces cost
  - Less cleaning uses less USC fabric and solvent
  - Less expensive than alternative wipe-on coatings
  - Easy to apply to new or existing stencils
  - Chemically inert when dry to ensure no possible interaction with paste
  - Forms a permanent bond and can be reapplied as it only adheres to uncovered areas
  - REACH compliant
  - Compatible with stainless steel or nickel stencils
  - One pouch will coat one stencil (measuring up to 29″ × 29″)

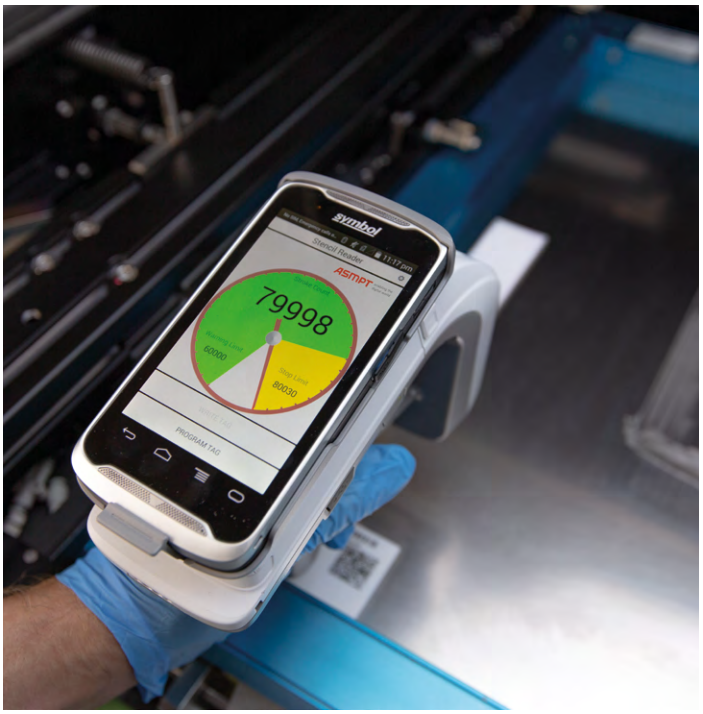


NanoClear® STENCIL COATING		
Part number		**Description**
SAP	**DEK**	
03128620	431800	Box of 10 wipes

Smart Stencil

Smart Stencil is our complete solution for managing the service life of stencils. It is smart, RFID-based, and transparent. Never again will the use of outdated stencils hurt the quality and efficiency of your printing processes.





Declines in tension and surface quality, which are normal as stencils age, reduce the quality, yield and process stability of the solder paste printing process. Smart Stencil is an RFID-based solution that provides for the first time a simple, convenient, and seamless solution for monitoring the service life of stencils.

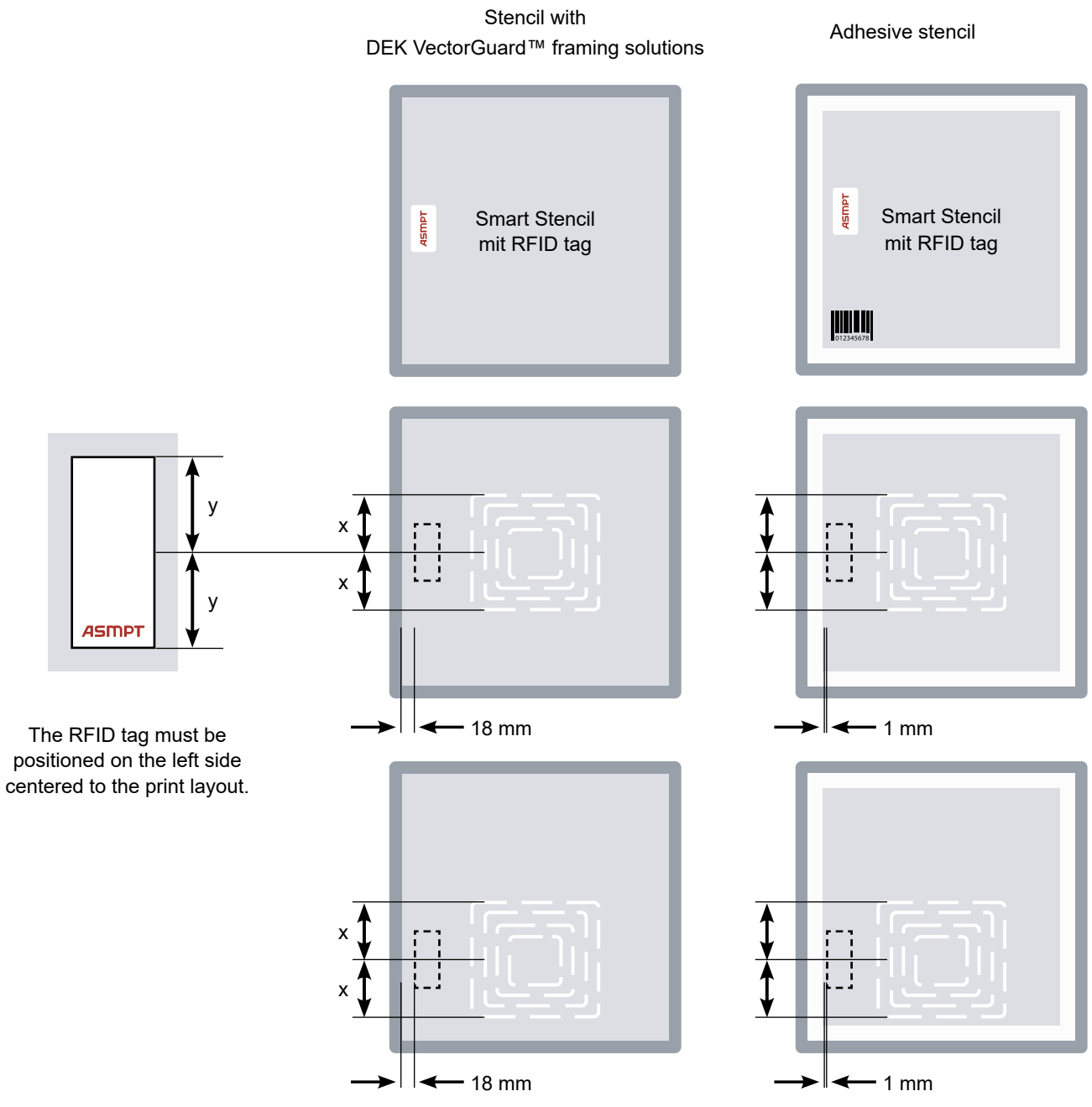
Its core components are supplied RFID tags by ASMPT which are applied by the stencil manufacturer – or by the user – to each stencil to identify it and store basic data about it. DEK printers equipped with the Smart Stencil option record each printing cycle on the RFID tag even if the stencil is used on different lines.

The basic data and print cycles stored on the RFID tags can be read by DEK printers with the Smart Stencil option and by handheld devices. The ability to store warning thresholds and maximum values for the number of print cycles makes seamless process control possible. For example, when the threshold level is reached, the system can use this information to order a new stencil. The necessary data can also be stored on the RFID tag. When the maximum value is reached, the printer stops the printing process.

Functions and benefits

- Process stability through seamless service life management
- Smart Stencil RFID tags available for stencils from all manufacturers
- Customers can apply RFID tags themselves
- Service life data can be stored on and recalled directly from the stencil RFID
- Ability to store a stencil profile (technical data, manufacturer, reordering data, storage locations, etc.)
- DEK printer with the Smart Stencil option write to the tags with each print cycle
- Manual entries possible with the RFID handheld device
- Customer-definable warning and maximum thresholds
- Warning threshold optimize ordering processes and in-house logistics
- Reaching the maximum threshold stops the printing process; it can only be overwritten by authorized personnel
- Only available for the DEK NeoHorizon platform

Smart Stencil – Application and positioning



The RFID tag must be positioned on the left side centered to the print layout.

AVAILABLE FEATURES AND PARTS:

Part number		
SAP	**Description**	**Unit**
03216102-01	Smart Stencil Module (DEK Horizon)	Each
03215953-01	Smart Stencil Module (DEK NeoHorizons and DEK Galaxy)	Each
03216105-01	Offline Reader (EU and ETSI Model)	Each
03220448-01	Offline Reader (US and FCC Model)	Each
03216909-01	RFID Tag	Each
03216106-01	RFID Multi Pack & Fitment guide	50

AVAILABLE MPU'S (MACHINE)

Part number		
SAP	**Description**	**Unit**
03221004-01	Smart Stencil MPU (DEK Horizon)	Each
03221003-01	Smart Stencil MPU (DEK NeoHorizons and DEK Galaxy)	Each

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ASMPT enabling the digital world



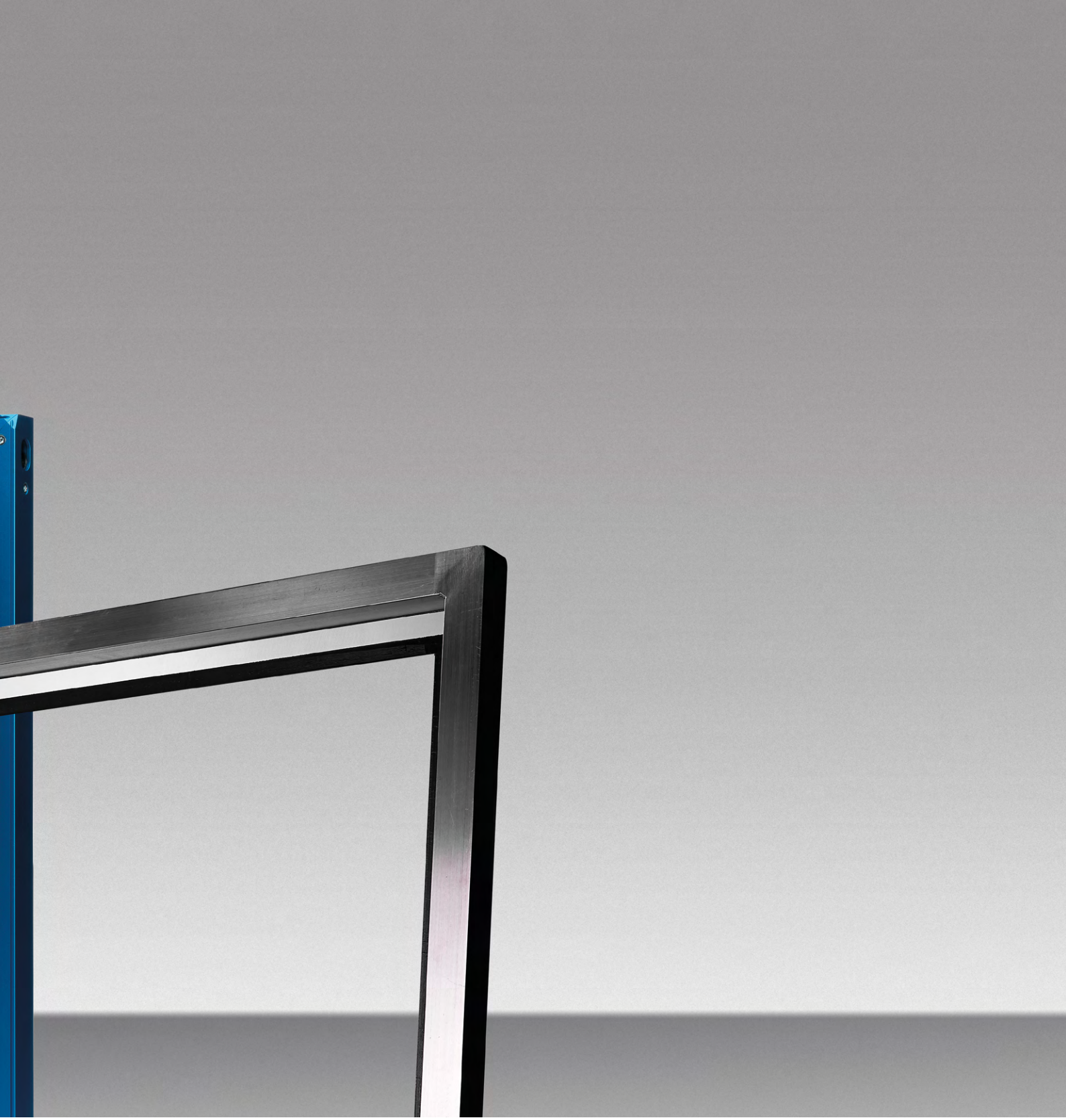
Stencil frame solutions

Improving the print process and boosting throughput



Stencil frame solutions

DEK VectorGuard™ frame solutions	32
DEK PowerGuard Stencils	35
DEK Mesh-mounted frame solution	36

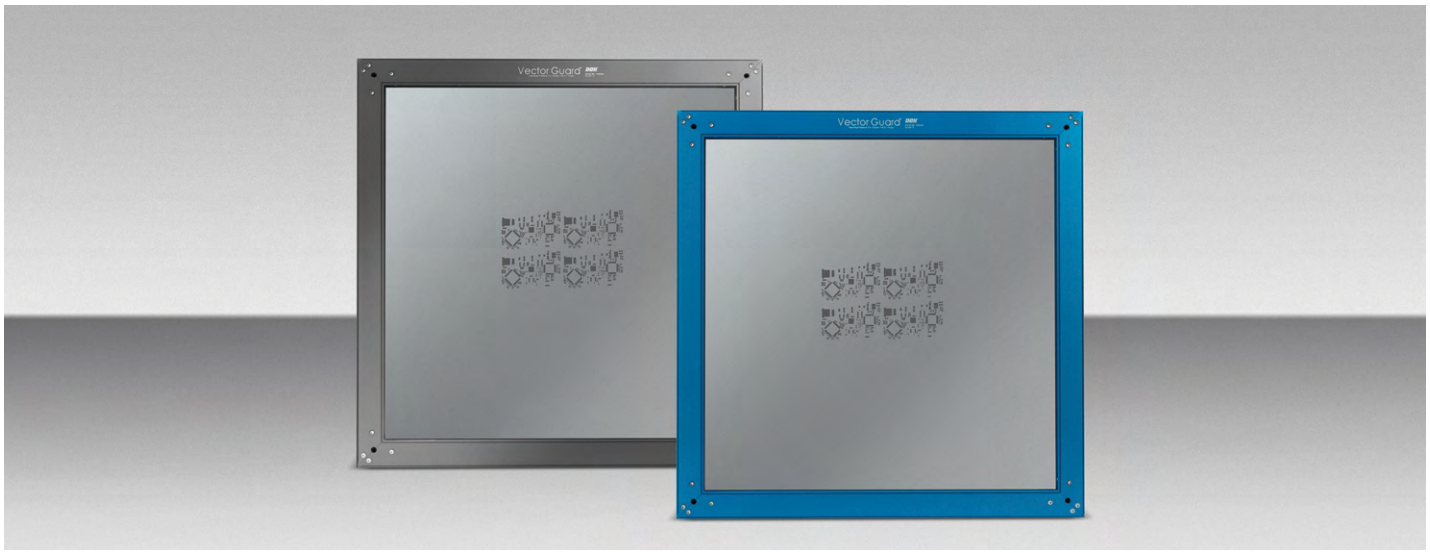


Stencil frame solutions

DEK stencil frame solutions give your stencil additional stability, ensure proper and even tension, and extend their service life. You build a foundation for stable printing processes with your choice of patented DEK VectorGuard frames or aluminum fa-mes for your DEK stencils. Both are available in a wide range of sizes to fit any stencil.

DEK VectorGuard™ frame solutions

ASMPT's patented, award-winning DEK VectorGuard™ System is the industry standard for high-performance stencil frame technology to facilitate fast changeover, tension control and longer lifetime.



ASMPT invented the unique DEK VectorGuard™ single-frame stencil system and replaced older industry mechanisms that were cumbersome, malfunction-prone and unsafe for operators with a simple, air pressure-controlled frame design. Today, DEK VectorGuard™ is the industry benchmark for high quality stencil technologies, ideal for fast changeover and product adaptability.

In addition to its changeover advantages, DEK VectorGuard™ delivers consistent tension over the life of the stencil. Traditional mesh-mounted stencils have initial high tension but, with use and cleaning, the elasticity of the stencil mesh can weaken, resulting in areas of "sag" that can adversely affect stencil aperture to pad alignment and printing yields.

Features and benefits:

- Unique mechanical tensioning system that secures the foil in the frame
- Evenly distributed tension across the entire stencil
- Greater, more consistent tension over the life of the stencil as compared to mesh-mounted stencils
- No epoxy bonds that can degrade or break down over time
- Easy-to-use and operator-safe
- Reduces stencil storage space requirements by as much as 75%
- Global availability and support

The DEK VectorGuard™ frame system is available in both a classic version and a high tension version to address varying manufacturing needs.

DEK VectorGuard™ Classic frame

The proven, original DEK VectorGuard™ Classic frame system is ideal for standard SMT processes that do not generally employ ultra-fine-pitch, highly miniaturized dimensions. Cost-effective and versatile, DEK VectorGuard™ Classic delivers the benefits of quick changeover, simplified storage, operator safety and low cost-of-ownership.

DEK VectorGuard™ High Tension frame

DEK VectorGuard™ High Tension frame, which is compatible with all DEK VectorGuard™ foils, is designed specifically for processes that integrate miniaturized dimensions and require extreme solder paste deposit definition. The DEK VectorGuard™ High Tension frame provides 45% greater tension than the DEK VectorGuard™ Classic frame, facilitating superior material transfer efficiency for small dimension printing.

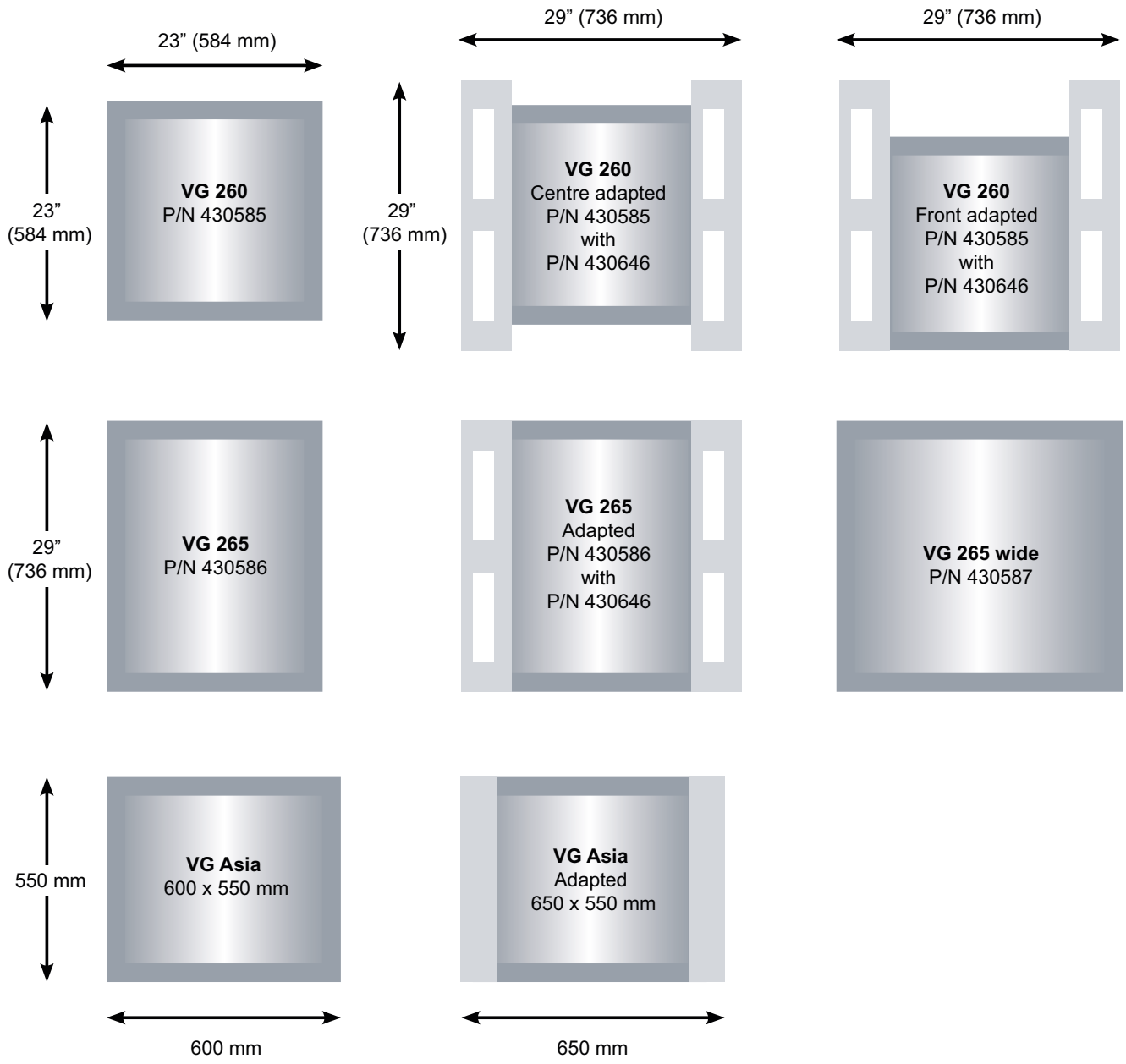
DEK VectorGuard™ FRAME								
Part number		**Description**	**Available stencil types**					
SAP	**DEK**		**Stainless steel**	**Nickel laser cut**	**DEK PumpPrint™**	**E-Formed**	**Tension**	**Adaptable to 29 × 29″**
03128711	800023	VG260 High Tension 23 × 23 × 1.2″ (584 × 584 × 30 mm)	■	■		■	≈ 47N	■
03130410	800029	VG265 wide High Tension 29 × 29 × 1.2″ (736 × 736 × 30 mm)	■				≈ 47N	
03130429	800039	VG265 High Tension 29 × 23 × 1.2″ (736 × 548 × 30 mm)	■	■		■	≈ 47N	■
03128796	430585	VG260 23 × 23 × 1.2″ (584 × 584 × 30 mm)	■	■	■	■	≈ 32N	■
03130214	430586	VG265 23 × 29 × 1.2″ (584 × 736 × 30 mm)	■				≈ 32N	■
03130215	430587	VG265 wide[1] 29 × 29 × 1.2″ (736 × 736 × 30 mm)	■	■			≈ 32N	■
03132464	186770	VG 650 × 550 650 × 550 mm	■		■	■	≈ 32N	

Note: 1. Limited stencil thickness 5, 6, 7 and 8 mils

DEK VectorGuard™ ACCESSORIES			
Part number		**Description**	**Remarks**
SAP	**DEK**		
03130337	430905	Wash-frame for VG260 stencils	Bottom profile 40 × 40 mm, VG stencil to slide in from the top
03134676	430906	Wash-frame for VG265 stencils	Bottom profile 40 × 40 mm, VG stencil to slide in from the top
03130339	430907	Wash-frame for VG265 wide stencils	Bottom profile 40 × 40 mm, VG stencil to slide in from the top
03127432	430887	Repair kit without tools	Kit includes all materials to re-tube a frame
03131166	186680	Pneumatic fitting	Tube fitting to connect to the tube (red head)
03128687	430646	Sidebar set to adapt 23″ frame to 29″	Adaptor bars to adapt a 23 × 23″ or 23 × 29″ to a 29 × 29″ size
03138776	186826	BOM 248 VG ROLLER SET OF 4	VG roller set to load VG frame into DEK 248 printer
03132620	430022	AIR PRESSURE FITTING	Replacement air fitting for VG frames
03133878	430451	VG ESD Cassette 23 × 23″ Black	ESD storage cassette for VG (23″ × 23″) stencil, black
03133877	430452	VG ESD Cassette 23 × 29″ Black	ESD storage cassette for VG (23″ × 29″) stencil, black
03132622	430609	ESD Plastic Cassette Hook	ESD Hook for ESD storage cassette
03162857	800033	VG Service Kit Level 1 Service	Please contact your local PSP sales representative
03162858	800034	VG Service Kit Level 2 Service	Please contact your local PSP sales representative
03162859	800036	VG Service Kit Level 1 Upgrade	Please contact your local PSP sales representative
00152975	800050	Annual Maintenance VG 23 × 23 (30 mm)	Please contact your local PSP sales representative
00152976	800051	Annual Maintenance VG 23 × 29	Please contact your local PSP sales representative
00152977	800052	Annual Maintenance VG 29 × 29	Please contact your local PSP sales representative
00152979	800053	Full Service VG 23 × 23 (30 mm)	Please contact your local PSP sales representative
00152980	800054	Full Service VG 23 × 29	Please contact your local PSP sales representative
00152981	800055	Full Service VG 29 × 29	Please contact your local PSP sales representative
00152966	800059	Annual Maintenance VG 23 × 23 (26 mm)	Please contact your local PSP sales representative
00152978	800060	Full Service VG 23 × 23 (26 mm)	Please contact your local PSP sales representative
03137294	800062	Annual Maintenance VG 600 × 550 / VG 650 × 550	Please contact your local PSP sales representative
03242331		VG Airline High Tension Kit	
03258506		VG Airline Classic Kit	

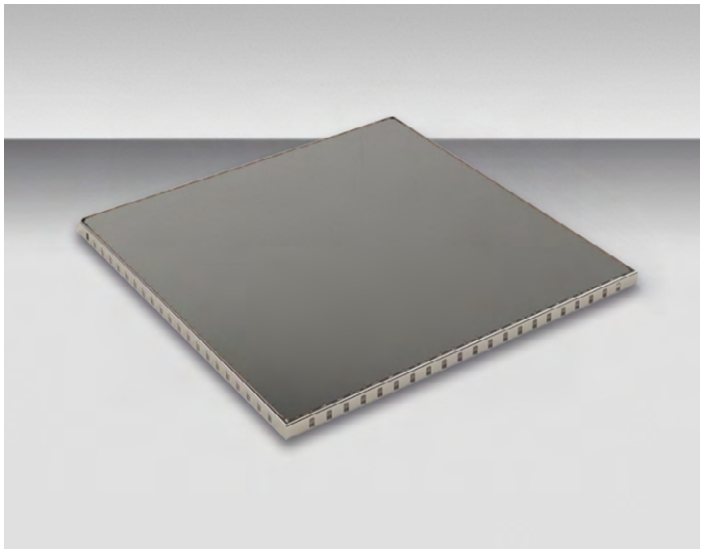
See also Stencils and screens storage on page 55 for DEK VectorGuard™ cabinets.

DEK VectorGuard™ FRAME SOLUTIONS, SIZES



DEK PowerGuard Stencils

High-tension stainless steel stencils designed to maintain stable print quality, reduce maintenance effort and optimize total cost of ownership in SMT manufacturing.



DEK PowerGuard Stencils are mesh-free stainless steel stencils engineered for stable and reproducible solder paste printing in SMT production. The stencil foil is permanently welded to a preloaded high-tension stainless steel frame using a fully automated manufacturing process. By eliminating mesh, adhesive and air systems, the design avoids common causes of tension loss, deformation and maintenance typically associated with conventional mesh-mounted stencils.

The rigid, single-piece construction ensures consistent mechanical properties over the entire stencil lifetime and supports reliable solder paste transfer, even in demanding SMT applications.

Manufactured from fine grain stainless steel, DEK PowerGuard Stencils are well suited for ultra-fine pitch and highly miniaturized assemblies. The maintenance-free design, combined with a low-profile frame, enables long service life, efficient handling and space-saving storage in modern SMT production environments.

Features and benefits:

- Constant stencil tension over the entire lifetime
- Designed for up to 200,000 print cycles, resulting in low total cost of ownership
- Improved and consistent understencil cleaning performance
- Full ESD compliance through conductive stainless steel construction
- Up to 6% larger printable area compared to mesh-mounted stencils
- Low-profile design reduces stencil storage space requirements by up to 50%
- Resistant to aggressive stencil cleaning processes and cleaning chemistries
- Fully recyclable stainless steel frame supporting sustainable production concepts
- Fast changeovers and compatibility with all common printer platforms

ASMPT can provide DEK PowerGuard stencils in a variety of sizes:

- PG 260: 23″ × 23″ (17 mm × 584 mm × 584 mm)
- PG 265: 29″ × 23″ (17 mm × 736 mm × 584 mm)
- PG 265 wide: 29″ × 24.5″ (17 mm × 736 mm × 620 mm)
- PG 650 × 550: 17 mm × 650 mm × 550 mm
- PG Semicon: 17 mm × 300 mm × 300 mm

DEK Mesh-mounted frame solution

Robust aluminum construction to exact manufacturing specifications ensures DEK Mesh-mounted frames provide optimum stencil stability for modern SMT print processes.



ASMPT can provide DEK Mesh-mounted frames in a variety of sizes:

- DEK 260 23″ × 23″ (40 mm × 584 mm × 584 mm)
- DEK 265 29″ × 29″ (40 mm × 736 mm × 736 mm)
- 40 mm × 600 mm × 550 mm
- 40 mm × 650 mm × 550 mm
- Space saver 29″ × 29″ (10 mm × 736 mm × 736 mm)

By request, non-standard framed stencils can be supplied; please contact your local representative.

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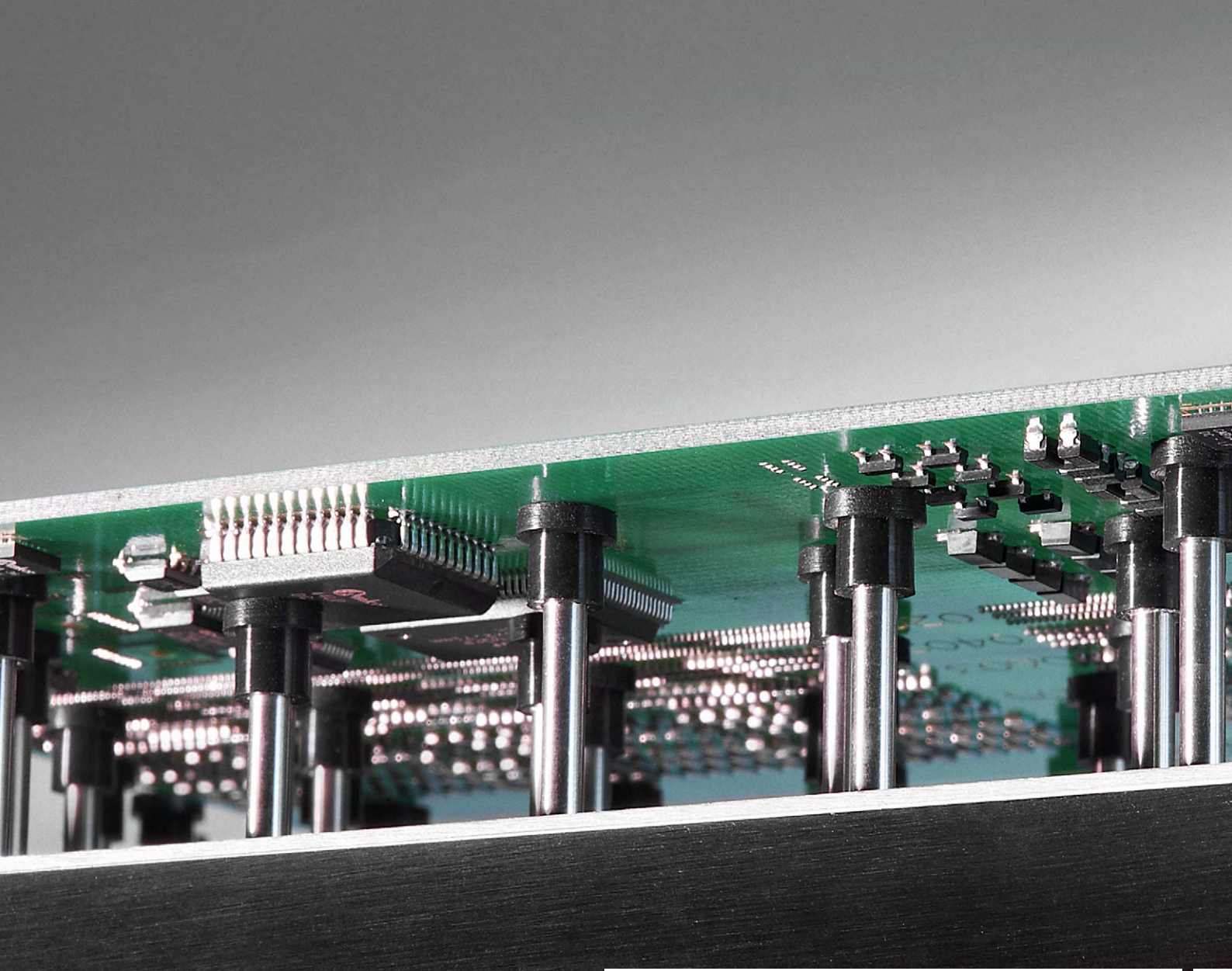
ASMPT enabling the digital world



Substrate support solutions

Highest and profitable yield



PCB support solutions

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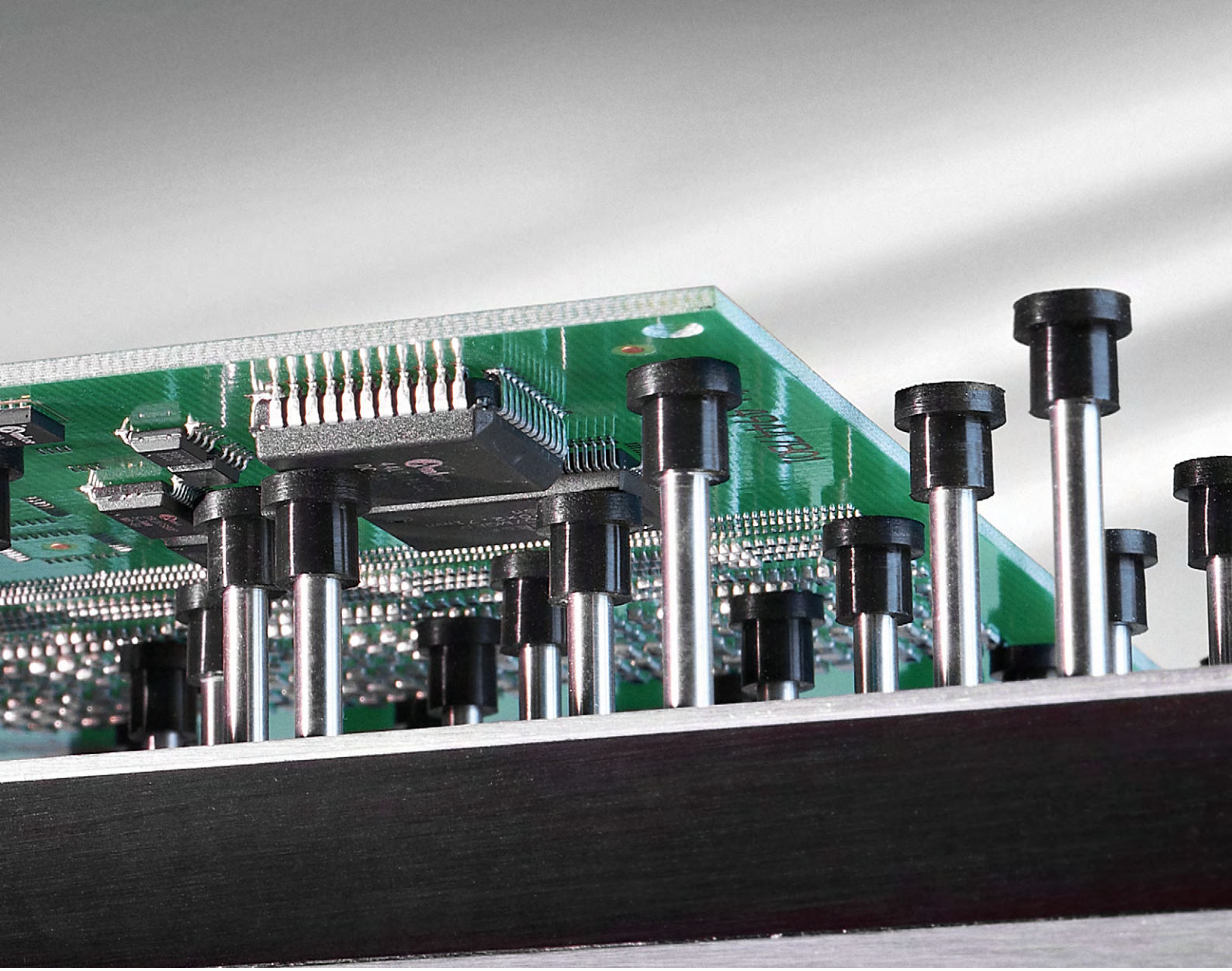


PCB support solutions

Having a solid and even support for the substrate is a key to a high yield and more efficiency in screen and stencil printing. ASMPT offers a broad spectrum of custom-tailored, automatic and modular toolings and carrier systems for virtually any production requirement.

Solutions for supporting previously singulated substrates ensure maximum efficiency and precision in these innovative and increasingly popular printing processes for particularly demanding applications. ASMPT supplies a choice of different tooling versions with mechanical and optical alignment.

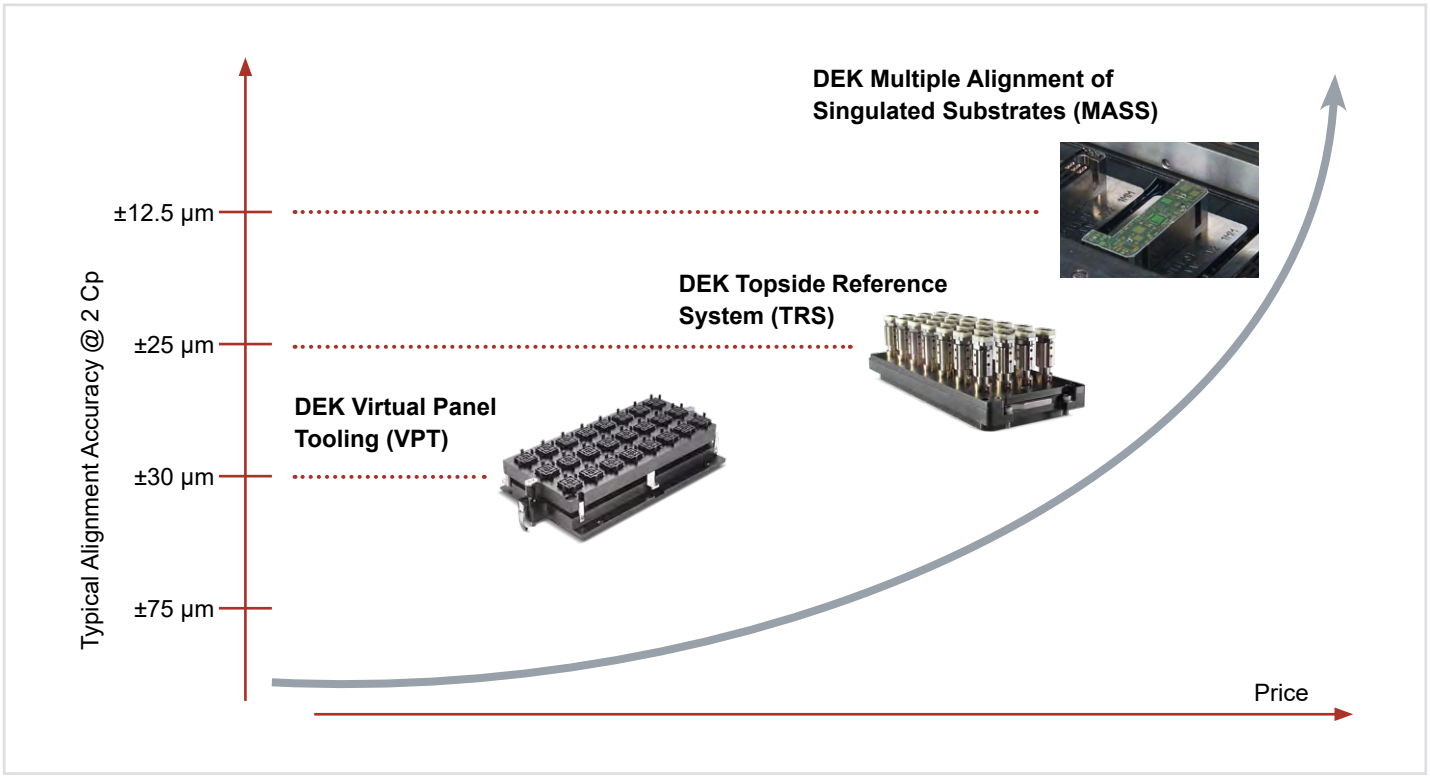
For classic panel printing applications, ASMPT offers a broad spectrum of support solutions ranging from application-specific tooling and carrier system to DEK Flex Support and highly flexible DEK Grid-Lok™ solutions whose support pins adapt automatically to any requirements and topology.

Functions and benefits of SMT toolings:

- Improved performance
- More efficiency
- Reduced costs
- More capabilities
- Technological leadership

Singulated Substrates Support

Singulated Substrates Support allows you to operate innovative process chains where only substrates that have been singulated and tested as good are printed to maximize your yield and productivity.



The growing complexity and density of applications increases the proportion of faulty substrates. Moving substrates marked as faulty through the process hurts your yield and productivity – even if they are not printed and populated with components.

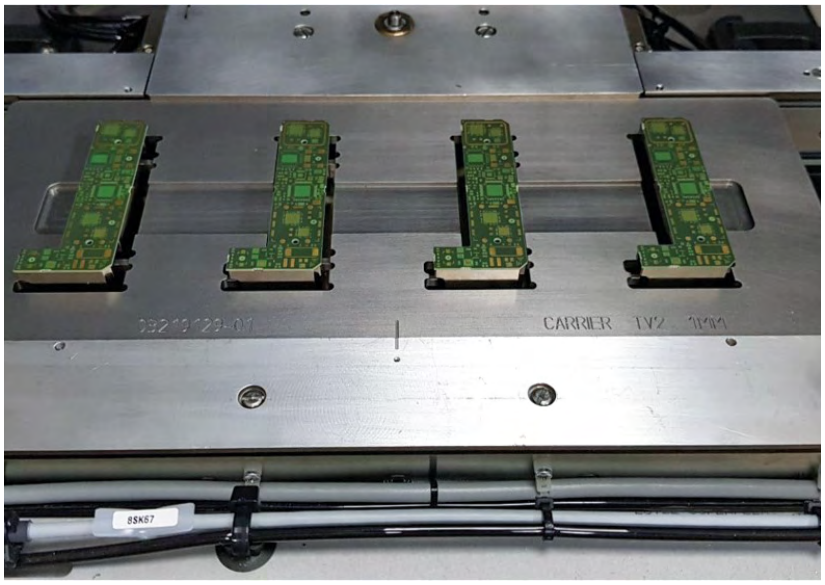
Singulated Substrates Support solutions provide a remedy. They allow you to transport, align and efficiently populate up to 72 singulated substrates in accordance with the respective degree of accuracy required.

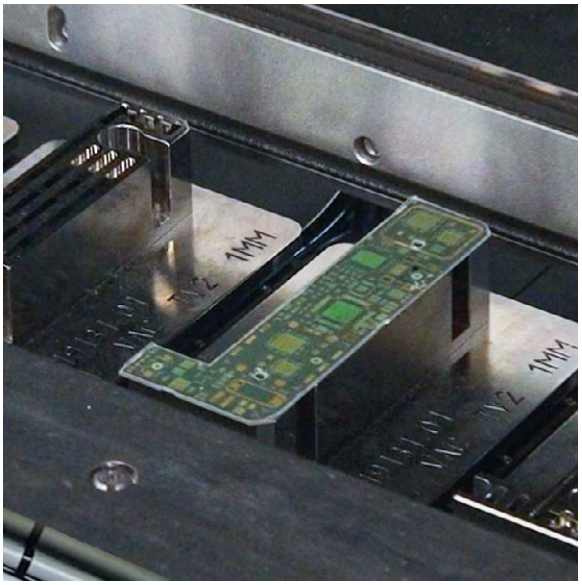
Benefits:

- Combined printing of singulated substrates
- More printing and line productivity
- Available for different DEK printers
- Accuracy levels up to 12.5 µm @ 2 Cp
- Precise printing processes
- Less mechanical stress on the circuit board (due to upstream substrate separation)

DEK Multiple Alignment of Singulated Substrates (MASS)

Multiple substrates are optically aligned at the same time – a technological breakthrough for efficient and high-precision printing processes with singulated substrates.





With DEK MASS, which sets new standards for printing processes with singulated substrates, ASMPT offers a perfect solution for particularly demanding applications such as smartphone panels, etc.

The printer's vision system detects the fiducials on each substrate before aligning it individually with an accuracy of up to 12.5 µm @ 2 Cp via movable, application-specific tooling towers (X, Y, theta) and vacuum-holding it in place for the printing process. The alignment after the measurement happens simultaneously for all substrates while they are raised from the carrier. This minimizes cycle times and guarantees maximum efficiency.

DEK MASS is produced as an application-specific tooling. DEK NeoHorizon printing platforms with the new table design can be retrofitted with DEK MASS at any time.

Features and benefits:

- Scalable design
- Maximum precision thanks to optical alignment (up to 12.5 µm @ 2 Cp)
- Simultaneous alignment via movable tooling towers guarantees short cycle times
- Vacuum fixation
- Surround plate for pressure optimization
- Maximum efficiency for demanding applications
- Technological leadership
- Retrofittable

DEK Topside Reference System (TRS)

The DEK Topside Reference System (TRS) for up to 72 singulated substrates adapts to tolerances in the substrate thickness and achieves more accuracy with its “active surround” technology.



DEK Topside Referencing System (TRS) is advanced tooling engineered to handle and align singulated substrates from a carrier to enable mass imaging. Leveraging the concepts of the award-winning Virtual Panel Tooling technology, DEK TRS moves singulated device processing to the next level.

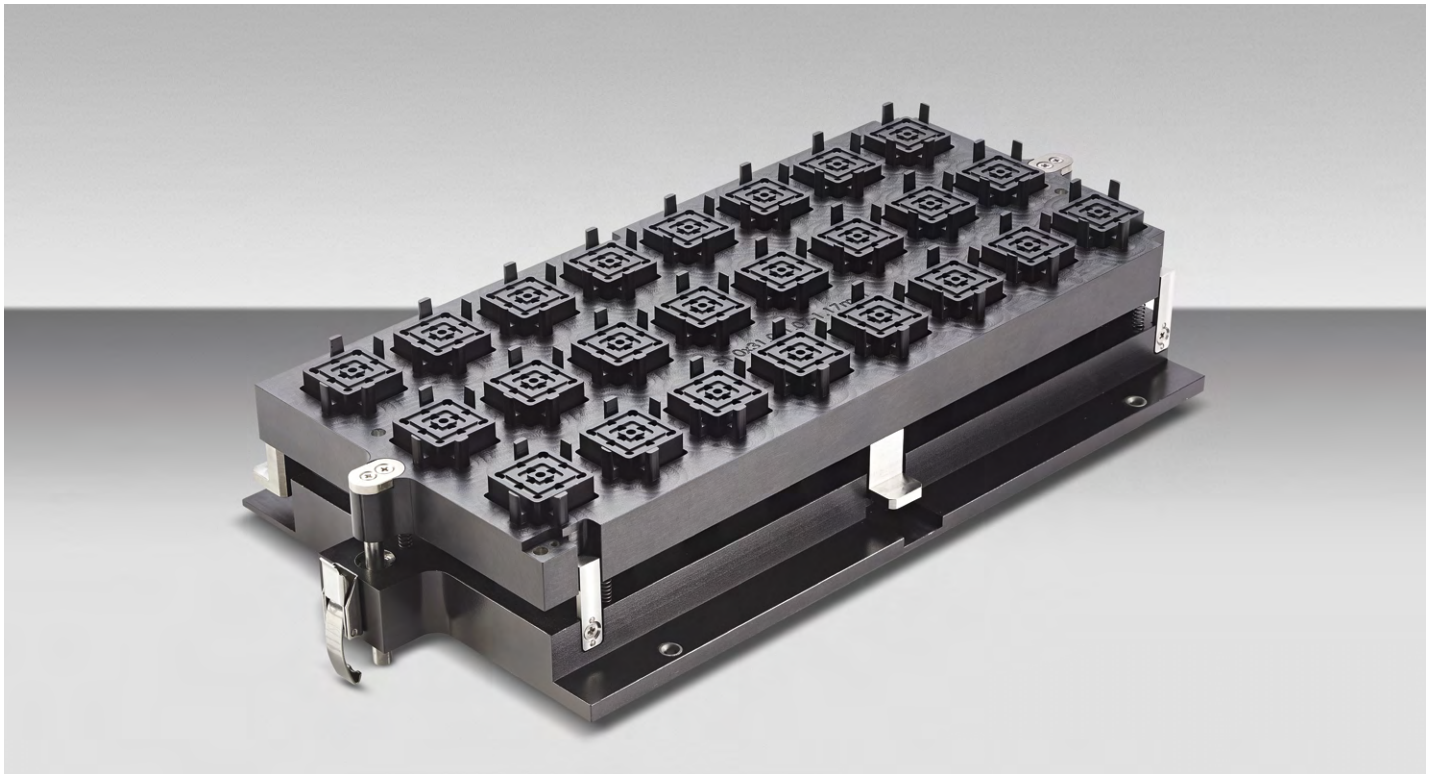
Specifically designed to address assembly complexities as flip chip manufacture moves to smaller pin pitch, thin-core and coreless technologies, DEK TRS provides edge alignment of multiple substrates into a virtual panel to facilitate multi-part printing with a single stroke. DEK TRS has proven its success with processor, SMT, ceramic and sensor applications, though its relevance for mass imaging of challenging products is unlimited.

Features and benefits:

- Enables imaging of singulated substrates in a single print stroke for increased throughput
- Compatible with various carrier types: J-boats, JEDEC tray, Flat Boat and custom carriers
- Effectiveness confirmed on challenging components such as LGA, BGA, 01005 passives and 0.25 mm - 0.3 mm BGA pad size, 0.5 mm pad pitch
- Fast cycle time, typically less than 30 seconds
- Reliable alignment of substrates that have different thicknesses or are warped thanks to the topside reference plate and the Z-Lock mechanism
- Active surround plate for more accuracy

DEK Virtual Panel Tooling (VPT)

DEK Virtual Panel Tooling provides an efficient way to boost throughput for singulated substrates by printing multiple parts with a single print stroke.



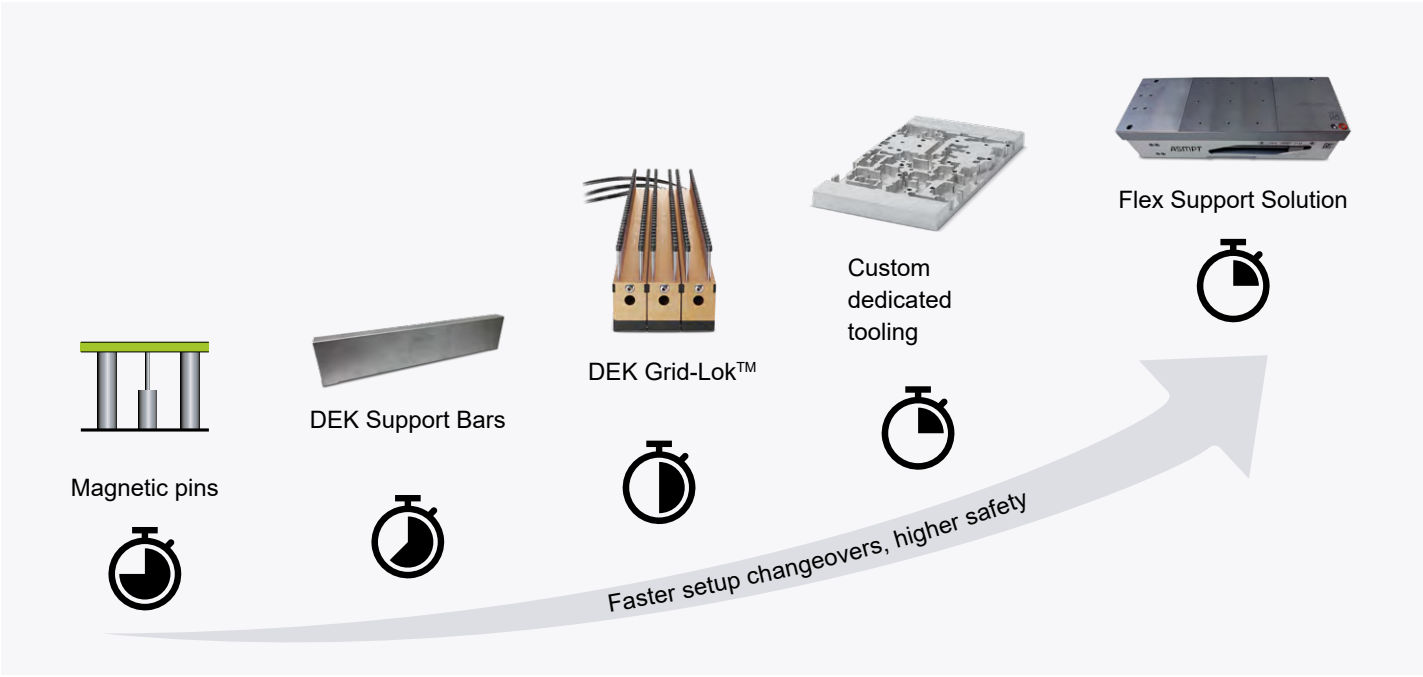
DEK Virtual Panel Tooling (VPT) allows the printer to process multiple individual substrates in a single print cycle. The substrates are presented to the printer in a carrier and are then lifted out, mechanically centered (aligned) and placed into a surrounding plate to create a “virtual panel” prior to coming in contact with the stencil and then mass imaged.

In combination with a DEK printer, DEK VPT offers a high-throughput, low-cost alternative to dispensing for many flip-chip packaging processes and other advanced applications, including sensors, PCBs and thermal interface materials (TIMs).

Features and benefits:

- Parallel processing of singulated substrates for more throughput – eliminates delays caused by the sequential printing/dispensing of individual substrates
- Scalable design for the simultaneous printing to 2 to 72 singulated substrates
- Highly efficient mechanical alignment
- Surround plate for pressure optimization
- Retrofittable on existing DEK printer platforms

PSP Standard Support



Flexibility, short setup times and traceability – we offer the optimal support solution for all requirements.

Flex Support Solution

A support solution that quickly pays off. Our modular support solution delivers maximum flexibility and the fastest setup changeovers.



Flex Support is the innovative support solution that gives you maximum flexibility. The secret is its modular design. The Flex Support Base Tower System gets adapted to the respective printer platform, including printers from manufacturers other than DEK. The system stays in the printer and keeps it open to all applications you want to support.

The second component are the Flex Support plates we manufacture on demand for your specific application. The advantage: You can mount each plate flexibly and quickly – without any tools – on any printer equipped with the Flex Support base tower system and start printing with minimal setup time. Even your warehouse will be happy because only the support plates must be stored and made available.



Flex Support Base Tower System

This component is adapted to the respective printing platform and remains in the printer. That way, the printer is always ready to support a wide range of applications.

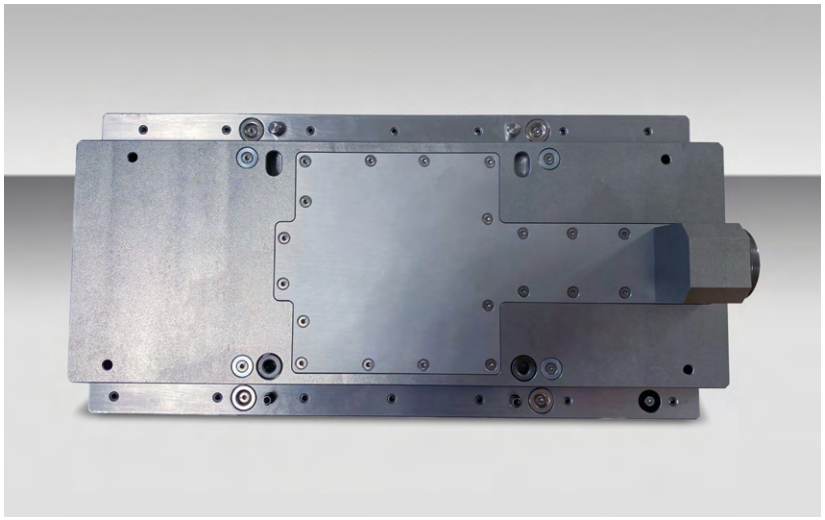
Functions and benefits:

- Easily adjustable in size (80 to 300 mm)
- Stays in the printer, i.e. one system for all applications
- Available for DEK Horizon, DEK NeoHorizon, and DEK TQ
- Also available for printing platforms from other manufacturers
- Play-and-play fastening without screws

FLEX SUPPORT TOWER OVERVIEW	
Part number	**Description**
SAP	
03176910-01	Flex Support Tower – DEK
03177829-02	Flex Support Tower – DEK TQ platform
03177491-02	Flex Support Schnaidt Tower – DEK
03176911-01	Flex Support Tower – EKRA
	Other Tower on request

FEATURES SPECIFICATIONS	
Material Spec	EN AW7075
Surface	Hard Anodised
Tower Height	58.7 mm +0/-0.02 mm
Tool plate Thickness	22.3 mm +0/- 0.02 mm
PCB Bottom Ref. Height	81 mm
Applicable PCB Size min (L/W)	100 mm/100 mm
Applicable PCB Size max (L/W)	550 mm/450 mm
Applicable PCB thickness	0.8 mm to 10 mm
Vacuum Option	Yes
Weight tower	2.3 kg

SPARES LIST FOR FLEX TOWER	
Part number	**Description**
SAP	
03181710-01	Flex Tower DEK - PI
03181711-01	Flex Tower EKRA - PI
03181712-01	Flex Tower Yamaha - PI
03181713-01	Flex Tower MPM MN667 - PI
03181714-01	Flex Tower MPM - PI
03181715-01	Flex Light Tower Panasonic - PI
03181716-01	Flex Tower - Rear pin
03181717-01	Flex Tower - Front flattened pin D6
03181718-01	Flex Tower - Front pin - D6
03181719-01	Flex Tower - Knob set



Flex Support Plates

Support plates suitable for the Support Flex Base Tower Systems – optionally manufactured for specific applications. Plates can be installed quickly without tools.

Functions and benefits:

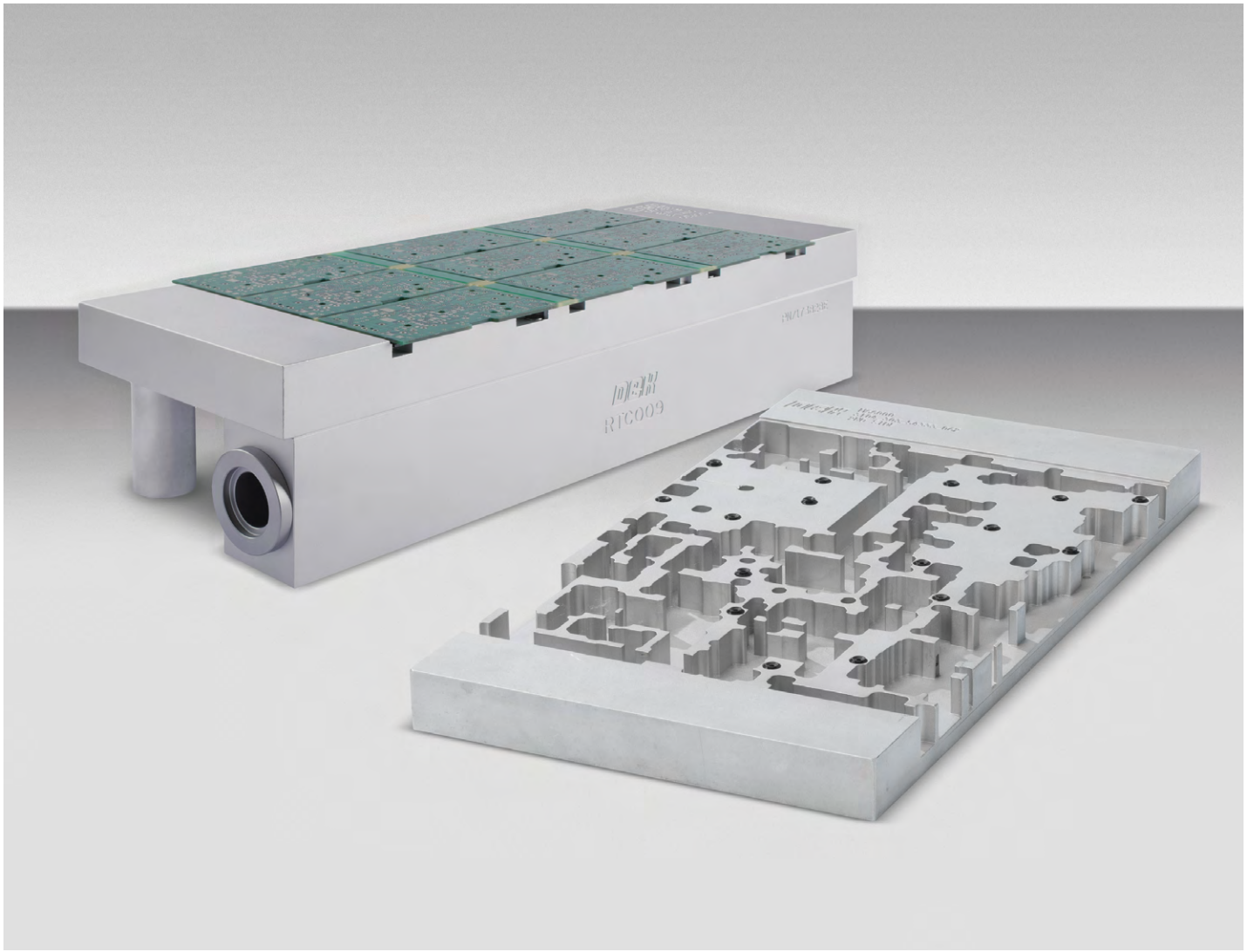
- Four models:
  - 1st/2nd pass (support for unpopulated or previously populated PCBs)
  - With or without vacuum
- Anodized surfaces for easy cleaning
- Low weight for easy handling and storage
- Delivery
  - Measurement protocol for each support plate
  - Application-specific support plates as per the customer's specifications

FLEX SUPPORT PLATE OVERVIEW	
Part number SAP	**Description**
03176914-01	1st Pass Plate (22.3 mm)
03176916-01	1st Pass Vacuum Plate (22.3 mm)
03176915-01	2nd Pass Plate (22.3 mm)
03176917-01	2nd Pass Vacuum Plate (22.3 mm)

FLEX SUPPORT PLATE COMPATIBILITY							
	DEK Micron* Series	DEK TQ Series	EKRA (Serio/X5)	YAMAHA	MPM (Edison)	MPM (Accela/ Momentum)	Panasonic (SPG/Sp series)
1st Standard non-vac 22.3 mm	✓	✓	✓	✓	✓	–	–
2nd Standard non-vac 22.3 mm	✓	✓	✓	✓	✓	–	–
1st Vacuum 22.3 mm	✓	–	✓	✓	✓	–	–
2nd Vacuum 22.3 mm	✓	–	✓	✓	✓	–	–

*DEK Micron = Printer portfolio ranging from DEK Horizon to DEK NeoHorizon

Custom dedicated tooling



Custom dedicated tooling solutions are designed for optimal substrate support and the best quality print. Because any movement or incorrect positioning of the substrate during processing can result in defects, ASMPT employs proven design concepts and solid manufacturing methods to safeguard against these issues. An additional benefit: the side support of the squeegee, that will improve not only the lifetime of the stencil significantly, but also the print quality.

From support for standard PCBs to flexible boards and ultra-fine-pitch board geometries to singulated products, ASMPT offers a variety of dedicated tooling solutions. In addition to DEK printers, dedicated tooling is compatible with most commercialized screen printing platforms, placement machines, inspection equipment and test systems.

Benefits:

- Process safety and control
- Increased stencil life
- Reduced cleaning schedule
- Increased squeegee speed
- Avoid or reduce short circuits
- Avoid or reduce paste residue
- Minimized line downtime
- Improved print quality

FEATURES SPECIFICATIONS	
Data format	Gerber, HPGL, IGES, DXF, STEP, STL
Finish option	Standard tool finish – sand blasted, natural (other by request)
Stencil support	ProFlow, squeegee, jetting, other*
Vacuum option	Requires a vacuum option to be fitted to the target machine
Aluminium plate (standard size)	Up to 550 × 270 × 50 mm
Surface flatness	<0.05 mm
Aluminium plate (maximum size)	Up to 550 × 450 × 150 mm
Surface flatness	<0.1 mm
Dedicated Tower (Support bar or H-tower)	55.6 mm +0 mm / -0.025 mm
Compatible with ASMPT printer	Tooling solutions available for the complete range of DEK printers
Tooling solutions for Non ASMPT printers	MPM, EKRA etc (please contact us with your machine type)

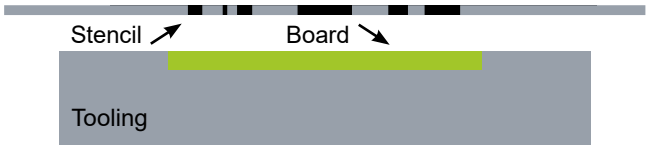
Tooling Type

1st pass – for a blank PCB with no components fitted typically means a flat support surface on the tool. 2nd pass – for a PCB with components fitted to one side. This means the support surface will have pockets to avoid the components on the PCB.

Depending on the process required, it is often more cost-effective to design a 2nd pass-capable tooling block that can also be used for the 1st pass requirement.

Vacuum capability can be added to either tooling design for the most effective support surface.

TOWER OVERVIEW	
Part number SAP	**Description**
03175938-01	Dedicated narrow tower with vacuum for DEK TQ printer (incl. 2 support pins)
03154262-01	Dedicated narrow tower with vacuum (incl. 2 support pins)
03154264-01	Dedicated narrow tower without vacuum (incl. 2 support pins)
03154263-01	Dedicated narrow tower dual lane (incl. 2 support pins)
03154261-01	Dedicated H-tower (incl. 2 support pins)
03154265-01	Dedicated narrow tower without vacuum 0.6 mm holes (incl. 2 support pins)
03154266-01	Dedicated flat leg support (2 pcs)
03154268-01	DEK Classic Support Plates (25.4 mm) - 1st pass non-vacuum
03154270-01	DEK Classic Support Plates (25.4 mm) - 1st pass with vacuum
03154269-01	DEK Classic Support Plates (25.4 mm) - 2nd pass non-vacuum
03154271-01	DEK Classic Support Plates (25.4 mm) - 2nd pass with vacuum



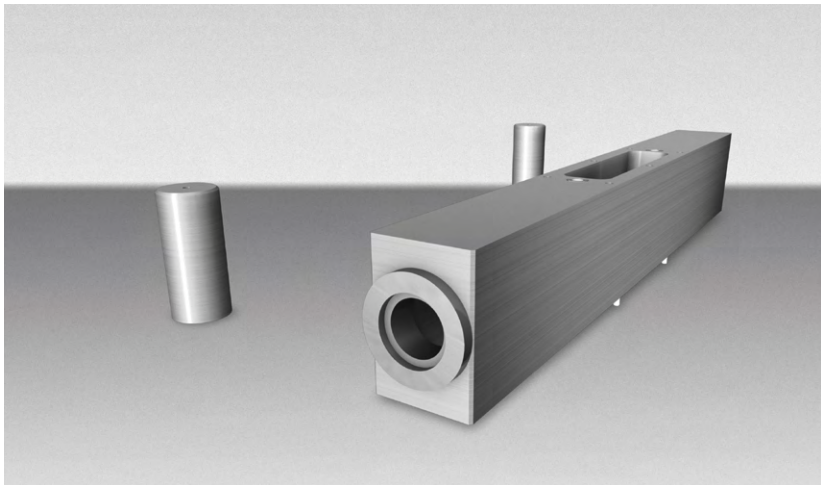
1st pass tooling support (flat plate)



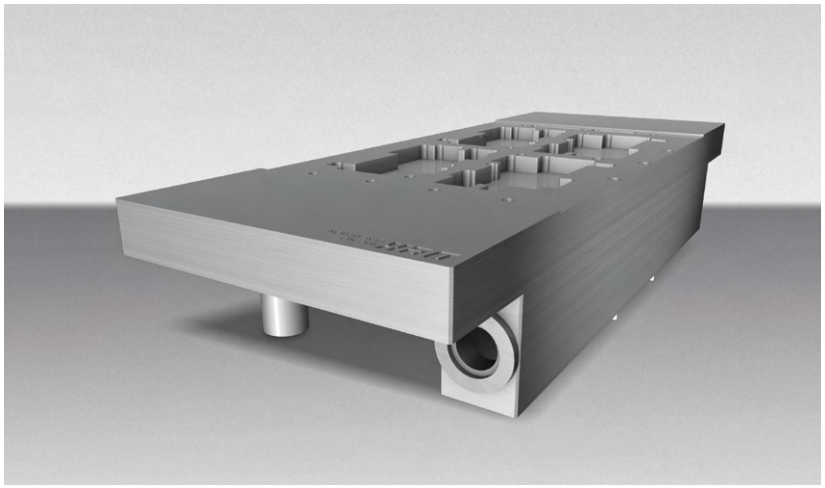
2nd pass tooling support with routed component pockets



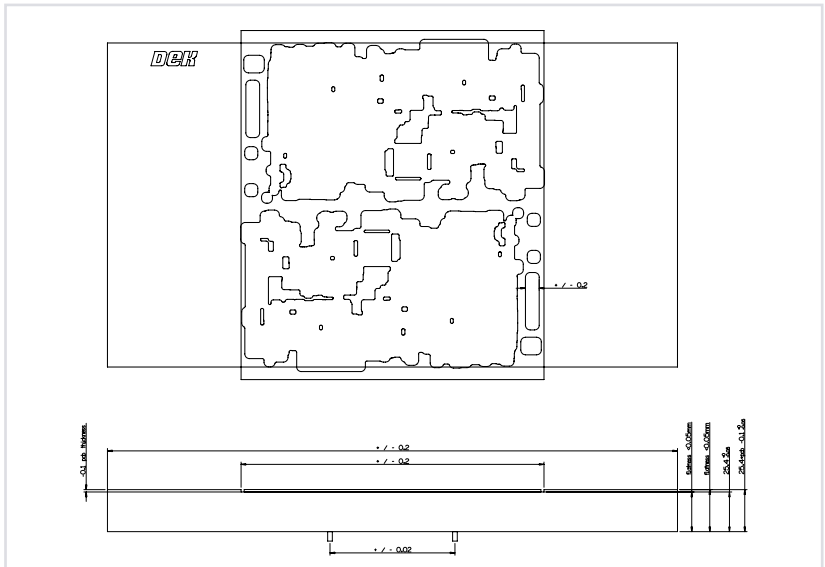
Single routed tooling plate to support side 1 and 2
(1st and 2nd pass tooling plate)



'Narrow Tower' for DEK printers



'Narrow Tower' with tooling plate



Support tower

Customers can use an existing stock tooling plate or specify a new tooling plate to be supplied with the tool.

For DEK printers, the current standard machine mounting hardware is called the "Narrow Tower". This is supplied with two additional pillars that are fitted to the rear side of the tooling plate.

A single tower can be used with many tooling plates, if required. The tower has alignment pins that interface with the rising table to ensure a repeatable and accurate fitting to the target machine.

Vacuum

Standard vacuum capability is added to the tooling plate in the form of pockets, holes or channels which are then routed through to the support tower.

Vacuum cups and O-ring seals, flat gaskets and custom seals are available and can be applied to the design as an option when required.

Tooling tolerances

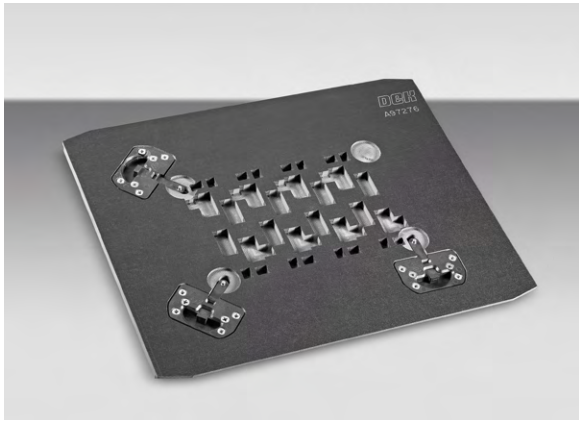
For standard tooling products, manufacturing and inspection is carried out in accordance with the tolerances as shown in the image on the left.

Advantages

- Process safety and control
- Increase stencil lifetime
- Reduced cleaning schedule – improved PPH
- Increased squeegee speed
- Avoid / reduce short circuits
- Avoid / reduce paste residue
- Minimize line downtime
- Improved print quality

DEK PCB pallet solution

Electronics miniaturization driven by mobile electronics, wearables, high-density connectors and LED strips require printing onto flexible PCBs, small boards and odd-shaped substrates. These applications need fixed pallets for robust transport through the SMT process.

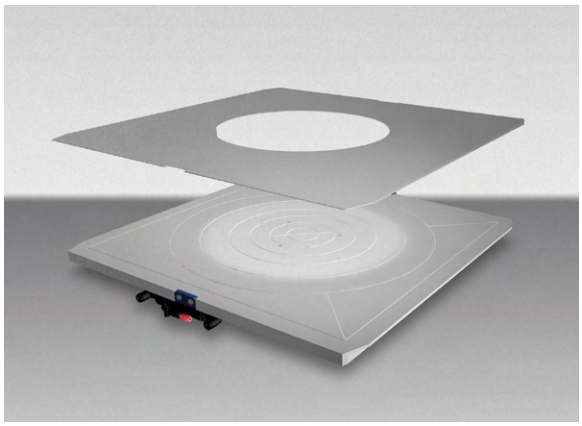


DEK PCB pallets

Transport pallets, flex pallets, and singulation pallets

Pallets facilitate the transport and printing of challenging substrates which may be too small, flexible or odd-shaped for standard printing processes. ASMPT can custom design and manufacture pallets in varying quantities, depending on specific requirements.

Pallets are typically made of Durastone to withstand high oven temperatures. Other materials are available on request.



DEK Wafer pallet

Universal wafer pallet: a lightweight (approx. 4 kg) wafer pallet that uses vacuum grooves to secure and hold the wafer.

Precision wafer pallet: a heavy pallet option that requires an additional machine transport rail upgrade. This pallet has a high flatness specification and utilizes a porus material to support the wafer and maintain vacuum.

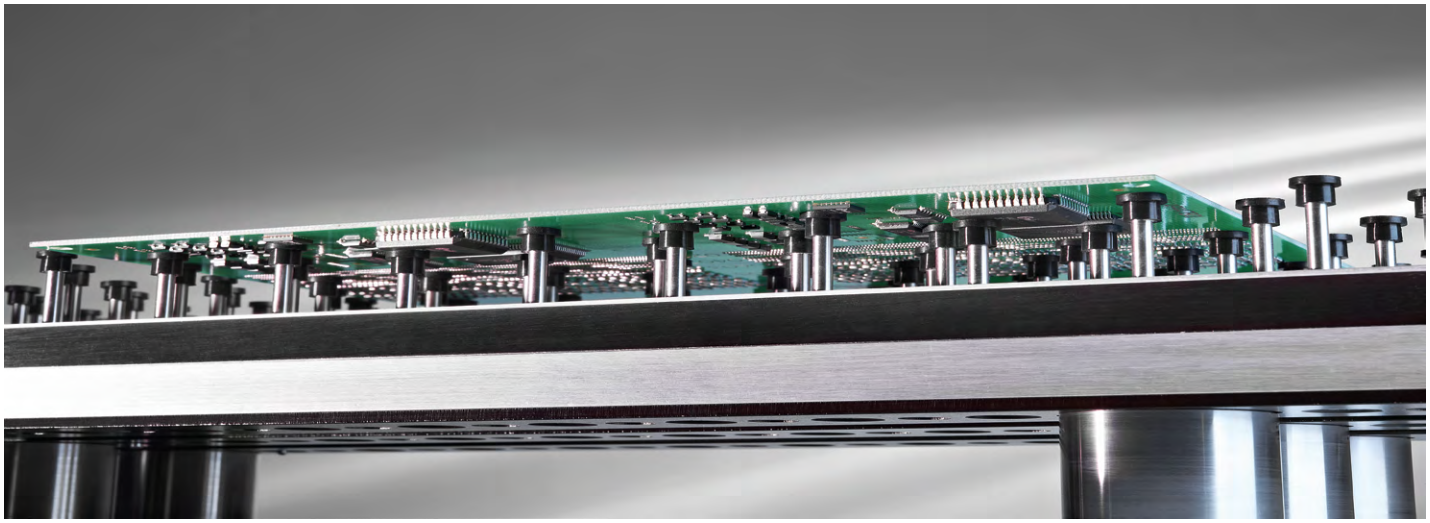
Both the standard and precision pallets utilize a wafer shim to contain the wafer. Wafer sizes of 100 mm to 300 mm with thicknesses of 150 µm and above can be accommodated. Both systems are fitted with wafer ejector pins to release the wafer from the pallet, allowing a wafer handler to process the wafer before and after the print.

Key benefits:

- Consistent flatness, stable printing, process control
- Pallet size: 400 mm × 400 mm
- Wafer diameters: 4/5/6/8/12 inches (100 mm to 300 mm)
- Wafer thickness: 150 µm to 600 µm
- The wafer is vacuum-secured during transport; automatic and manual operation
- Custom solutions available
- Data formats: Gerber, DXF, DWG
- Material: Durastone, aluminum and sintered stainless steel.

DEK Grid-Lok™ premium automatic substrate PCB support for SMT processes

Unique, patented automatic pin array technology facilitates fast product changeover and unmatched substrate support.



Recognizing the need for a flexible alternative to dedicated and more costly substrate support, ASMPT developed the multi-award winning, patented DEK Grid-Lok™ system which remains the industry's premier automatic tooling solution.

Designed to accommodate assemblies of all types – from basic SMT to high-density, highly miniaturized products – DEK Grid-Lok™ is the best total process substrate support technology on the market.

Key benefits:

- High versatility
- Unparalleled flexibility
- Minimal operator intervention
- Reduced or zero changeover time
- No risk of component damage

System requirements:

- Air pressure: 80-102 PSI (0.55-0.7 Mpa)
- Air quality: 2.3.3 where 2 (dirt) = 1 micron, 3 (water) = -20° C pressure dew point and 3 (oil) = 1 mg/m3
- 120-240 AC supply to provide 24 VDC to power control box

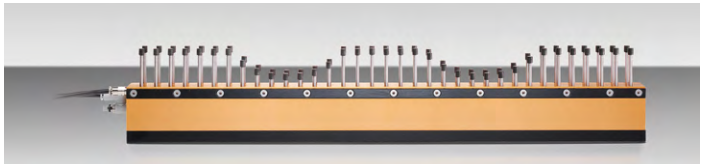
System components:

- Control box to provide module(s) – machine interface
- Hand controller to set operating mode
- Up to 6 DEK Grid-Lok™ modules
- Field installation kit
- Manifold used to support up to 6 modules
- Machine-specific fitting tools
- Machine-specific interface (sensor or pneumatic input to start the pin raise and clamp cycle)
- All interconnecting hardware

DEK Grid-Lok™ Gold

DEK Grid-Lok™ Gold provides robust, adaptable board support for screen printing and testing processes.





Module specifications:

Depending on the specific machine application, the modules have the following specifications:

- Available tooling heights 39 mm to 98 mm
- Available module lengths: 305 mm, 457 mm
- Component clearance: 13 mm to 40 mm
- Pin count
  - Module width: 32 mm
  - 305 mm – 46 pins configured in 2 rows on a 12.7 mm × 20.7 mm pitch
  - 457 mm – 70 pins configured in 2 rows on a 12.7 mm × 20.7 mm pitch
  - Pin setting force – 5 grams per pin
  - Pin cap – electrically conductive silicone rubber compound

Stencil printers:

- ASMPT
- Ekra
- Ersa
- Juki GKG
- MPM Speedline
- Panasonic
- Speedprint
- Yamaha

DEK Grid-Lok™ GOLD KITS

Part number		Controller/ description	Manifold(s) included	Included in all kits
SAP	DEK			
03140727	KIT_111	111_CTL – single table system	1 each, 006_MAN, manifold for 6 modules	INC_FIK - Field Installation Kit, 002_CON – Handheld controller/holder (only for single table system), 6 each twin leashes per manifold, all necessary fittings, tubes and air pipes for kit installation
03136308	KIT_211	211_CTL – dual table system	2 each, 006_MAN, manifolds for 12 modules	

Note: 077_SBA – optical sensor which is not included in the kit, may be required if the host machine doesn't have pneumatic activated board clamps. Please consult your local ASMPT representative for more information.

DEK Grid-Lok™ GOLD AUTOMATIC MODULES

Height (mm)	Part numbers				Equipment
	GOLD, HD, 12 inch modules		Gold, HD, 18 inch modules		
	SAP	DEK	SAP	DEK	
39	03132658	GHD3912	03130467	GHD3918	MPM Momentum, Accela, Accuflex
41	03132059	GHD4112	03131865	GHD4118	Panasonic SP18, 60, 70, 80, SPG
59	03148495	GHD5912	03148496	GHD5918	Speedprint
65	03132660	GHD6512	03148498	GHD6518	Juki GKG
67	03140916	GHD6712	03140833	GHD6718	Yamaha YSP
81	03130368	GHD8112	03128499	GHD8118	ASMPT
87	03130475	GHD8712	03130371	GHD8718	Ekra
98	03136187	GHD9812	03140858	GHD9818	Ersa

DEK Grid-Lok™ Silver

DEK Grid-Lok™ Silver is ideal for placement processes, where substrate support requires robustness and protection against vibration.





Module specifications:

Depending on the specific machine application, the modules have the following specifications:

- Available tooling heights: 53 mm to 135 mm
- Module length: 355 mm and 254 mm (for few heights)
- Module width: 32 mm
- Pin count: 27 pins configured in 2 rows, on a 25 mm × 20 mm pitch
- Component clearance: 16.5 mm
- Pin cap – electrically conductive silicone rubber compound

System requirements:

- Air pressure: 80-102 PSI (0.55-0.7 MPa)
- Air quality: 2.3.3 where 2 (dirt) = 1 micron, 3 (water) = -20° C pressure dew point and 3 (oil) = 1 mg/m3
- 120-240 AC supply to provide 24 VDC to power control box

DEK Grid-Lok™ SILVER AUTOMATIC KITS				
Part number		**Controller/ description**	**Manifold(s) included**	**Included in all kits**
SAP	**DEK**			
03140727	KIT_111	111_CTL – Single Table System	1 each, 006_MAN, manifold for 6 modules	INC_FIK - Field Installation Kit, 002_CON – Handheld controller/holder (only for single table system), 6 each twin leashes per manifold, all necessary fittings, tubes and air pipes for kit installation
03136308	KIT_211	211_CTL – Dual Table System	2 each, 006_MAN, manifolds for 12 modules	

Note: 077_SBA – optical sensor which is not included in the kit, may be required if the host machine doesn't have pneumatic activated board clamps. Please consult your local ASMPT representative for more information.

Placement systems:

- ASMPT
- Assembleon
- Fuji
- I-pulse
- Juki
- Panasonic
- Samsung
- Universal
- Yamaha

DEK Grid-Lok™ SILVER AUTOMATIC MODULES						
Height (mm)	**Controller**	**Part number**				**Equipment**
		Silver, MD, 10 inch modules		**Silver, MD, 14 inch modules**		
		SAP	**DEK**	**SAP**	**DEK**	
53	single	03132669	GMD5310A	03131866	GMD5314A	Fuji NXT M3, M6 single
53	dual	03132669	GMD5310A	03131866	GMD5314A	Fuji NXT M3, M6 dual
57	single	N/A	N/A	03148514	GMD5714A	UIC
57	dual	N/A	N/A	03148514	GMD5714A	UIC
65	single	N/A	N/A	03148517	GMD6514A	Juki, GKG
67	single	N/A	N/A	03132674	GMD6714A	Yamaha YSP
70	single	N/A	N/A	03148501	GMD7014A	Panasonic NPM, I-Pulse
76	single	N/A	N/A	03132681	GMD7614A	Yamaha YS12
76	dual	03148520	GMD7610AM*	N/A	N/A	Yamaha YS24
77	single	N/A	N/A	03136228	GMD7714A	ASMPT (SIPLACE F, C, S)
81	single	N/A	N/A	03136229	GMD8114A	ASMPT (DEK)
87	single	N/A	N/A	03148521	GMD8714A	Ekra
97	single	N/A	N/A	03136230	GMD9714A	ASMPT (SIPLACE D, SIPLACE SX), Juki
97	dual	N/A	N/A	03136230	GMD9714A	ASMPT (SIPLACE X), Juki FX-3
97	quad	N/A	N/A	03136230	GMD9714A	ASMPT (SIPLACE X), SIPLACE HS
98	single	N/A	N/A	03148522	GMD9814A	Ersa
132	single	N/A	N/A	03141189	GMD1324A	Samsung SM421
134	single	N/A	N/A	03141190	GMD1344A	Samsung SM481, 482
134	dual	N/A	N/A	03141190	GMD1344A	Samsung SM471

* Hybrid modules

DEK Grid-Lok™ SILVER MANUAL MODULES					
Height (mm)	**Part number**				**Equipment**
	Silver, MD, 10 inch modules		**Silver, MD, 14 inch modules**		
	SAP	**DEK**	**SAP**	**DEK**	
53	03130374	GMD5310M	03128587	GMD5314M	Fuji NXT M3, M6
57	N/A	N/A	03132672	GMD5714M	UIC
65	N/A	N/A	03148518	GMD6514M	Juki GKG
67	N/A	N/A	03132676	GMD6714M	Yamaha YSP
70	N/A	N/A	03138817	GMD7014M	Panasonic NPM, I-Pulse
76	03132680	GMD7610M	03132683	GMD7614M	Yamaha YS12, YS24
77	N/A	N/A	03132685	GMD7714M	ASMPT (SIPLACE F, C, S)
81	N/A	N/A	03128560	GMD8114M	ASMPT (DEK)
87	N/A	N/A	03128591	GMD8714M	Ekra
97	N/A	N/A	03128624	GMD9714M	SIPLACE D, SX, Juki
98	N/A	N/A	03148523	GMD9814M	Ersa, Takaya off line
132	N/A	N/A	03132667	GMD1324M	Samsung SM421
134	N/A	N/A	03141332	GMD1344M	Samsung SM481, 482, 471

DEK Grid-Lok™ spare parts





DEK Grid-Lok™ SPARE PARTS		
Part number		**Description**
SAP	**DEK**	
03128574	025_TIP	ESD rubber top caps for GSX old modules (25 pcs)
03128754	100_TIP	ESD rubber top caps for GSX old modules (100 pcs)
03128569	025_UTP	ESD rubber top caps for GHD gold modules (25 pcs)
03128778	100_UTP	ESD rubber top caps for GHD gold modules (100 pcs)
03128582	025_TMP	ESD rubber top caps for GMD silver modules (25 pcs)
03130302	100_TMP	ESD rubber top caps for GMD silver modules (100 pcs)
03128792	025_TSP	ESD rubber top caps for GHD 39mm MPM gold modules (25 pcs)
03130303	100_TSP	ESD rubber top caps for GHD 39mm MPM gold modules (100 pcs)
03128623	018_PRK	Pin repair kit old GSX 81mm DEK modules (25 pcs)
03128779	881_PRK	Pin repair kit gold GHD 81mm DEK modules (25 pcs)
03128713	887_PRK	Pin repair kit gold GHD 87mm Ekra modules (25 pcs)
03142684	009_PRK	Pin repair kit old GSX 75mm Panasonic modules (10 pcs)
03128733	818_PRK	Pin repair kit gold GHD 39mm MPM modules (10 pcs)
03132652	062_PRK	Pin repair kit gold GHD 62mm Takaya modules (25 pcs)
03177322	065_PRK	Pin repair kit gold GHD 65mm (25 pcs)
03132651	053_PRK	Pin repair kit silver GMD modules (10 pcs)
03128695	006_MAN	Manifold (pneumatic connector) with 6 outputs
03128699	006_SMF	Quick silver connect fitting female for manifold (6 pcs)
03130459	006_RMF	Quick red connect fitting female for manifold (6 pcs)
03136066	006_AFT	90 deg fitting 1/4″ tube
03130301	006_FLO	Air flow controller fitting for the manifold
03130460	018_FLO	Air flow controller fitting for GHD gold and GMD silver modules (5 pcs)
03130300	005_LEA	Twin tubing leashes for all modules (5 pcs)
03148504	041_BLA	Board lifters set 41mm (Panasonic SP)
03132653	067_BLA	Board lifters set 67mm (Yamaha YSP)
03128724	087_BLA	Board lifters set 87mm (Ekra)
03128500	077_SBA	Optical sensor with magnetic Base
03130304	111_CTL	Single Table DEK Grid-Lok™ controller
03132655	211_CTL	Double Table DEK Grid-Lok™ controller
03128656	002_CON	DEK Grid-Lok™ hand held remote control
03130298	001_DCP	24 volt power supply
03139626	005_SFT	Straight fitting 5/32″ tube x 10-32 thread for all modules
03144459	005_AFT	90 deg fitting 5/32″ tube x 10-32 thread for old GSX modules
03132654	111_VAL	Valve for control box 111_CTL
03148506	111_PSI	Pressure sensor for 111_CTL
03148505	111_PCB	Programmed circuit board for 111_CTL
03148507	211_PCB	Programmed circuit board for 211_CTL
03128723	518_MAG	Adhesive magnetic tape (5 pcs)
03132650	010_PIP	Pin in paste jig 10″ Silver module (jig to keep selected pins down)
03131335	012_PIP	Pin in paste jig 12″ gold module (jig to keep selected pins down)
03143235	014_PIP	Pin in paste jig 14″ silver module (jig to keep selected pins down)
03131852	018_PIP	Pin in paste jig 18″ gold module (jig to keep selected pins down)
03148494	553_PST	Plastic piston for the silver modules (5 pcs)
03148487	018_ORS	Orange rubber piston stoppers for the gold modules (50 pcs)
03178218		Connecting pin to the piston for DEK Grid-Lok™ Silver manual modules (5 pcs)
03178219		Conical springs for DEK Grid-Lok™ Silver manual modules (20 pcs)

DEK Support bars

Our support bars are an extremely flexible and easy-to-handle support option.



DEK support bars serve as a quick and universal support solution for PCBs to be printed on one side only and other substrates. The operator places the DEK support bar manually on the printing table between the conveyors. That way, a wide range of PCBs and substrates can be printed after a short setup time.

Features and benefits:

- Cost-effective solution for PCBs to be printed on one side only
- Average setup time
- Placement by the operator

Module specifications:

- Length: 400 mm
- Wide: 25 mm
- Height: 81 mm
- Weight: ~2kg

DEK SUPPORT BARS		
Part number		**Description**
SAP	**DEK**	
		On request: TGL DED BAR 250 × 25 × 81 Support
03180985-01		TLG DED BAR 380 × 25 × 81 Support TQ
03177469-01		TLG DED BAR 400 × 40 × 81 Support

Process Support Products
Webshop

smt.asmpt.com/en/myasmpt/webshop

ASMPT enabling the digital world



Stencil storage systems

Minimizing floor space and changeover times



Stencil storage systems

Active Stencil Storage	64
DEK VectorGuard™ cabinet	65
DEK VectorGuard™ tower cabinet	66
DEK VectorGuard™ mobile cabinet	66
DEK VectorGuard™ working station	67
DEK Mesh-mounted stencils/ DEK Precision screens storage	67



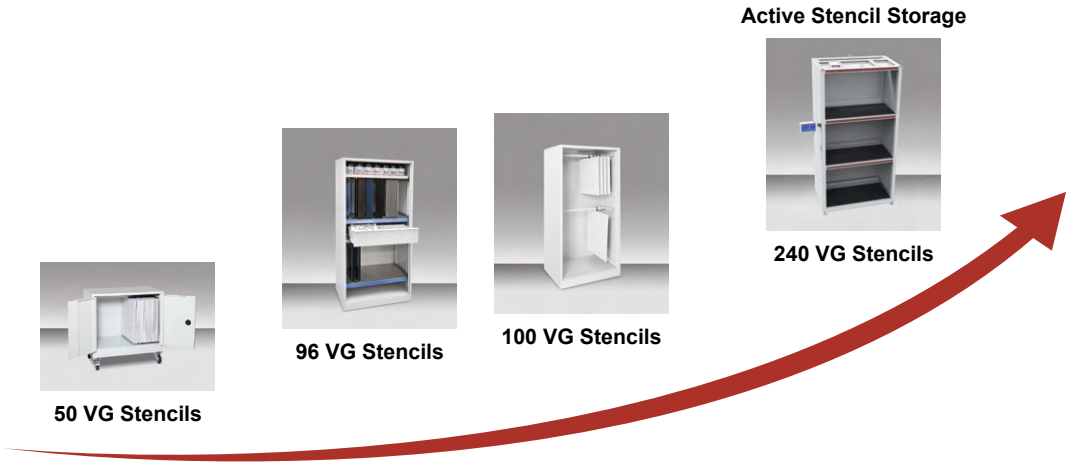
Stencil storage systems

DEK VectorGuard™ has revolutionized the paste printing process. Instead of having to use separate mesh-mounted frames for each stencil, DEK VectorGuard™ features easy-to-use foil mounting technology that saves up to 75% of storage space for stencils.

ASMPT has also developed a whole range of stencil cabinets to properly secure your investment. With the cabinets you make sure that stencils and frames are always in the right place and at hand when needed.

Stencil storage systems

Stencils and screens are a large investment; storing them properly will protect their value and prolong the usable life while providing organized, easy access. ASMPT has designed a complete portfolio of storage solutions for stencils and screens.



From minimum to maximum stencil storage performance solutions



Active Stencil Storage

- Fast, productivity-driven operation: barcode-controlled retrieval and storage in ~10 seconds for maximum productivity.
- Error prevention: LED-guided zones highlight the correct NPI or production stencil every time.
- Supports the intelligent factory: standalone or MES-integrated with network-enabled storage locations.
- High capacity, space-efficient storage: stores up to 240 VG stencils with clearly defined NPI and production zones.
- Simple to use: intuitive touchscreen operation with multilingual support.

DEK VectorGuard™ ACTIVE CABINET		
Part number	**Description**	**Size (mm)**
SAP		
03241832	Active Stencil Storage	1980 H × 1105 W × 695 D



DEK VectorGuard™ cabinet

- Ideal storage for 96 DEK VectorGuard™ stencils
- Special stainless steel adjustable, numbered runners for easy retrieval and return
- A practical drawer for convenient access and out-of-sight storage for all consumables and printing tools, such as squeegees
- Optional doors for additional stencil protection and safe-keeping

DEK VectorGuard™ CABINET			
Part number		**Description**	**Size (mm)**
SAP	**DEK**		
03128746	431190	DEK VectorGuard™ cabinet 260/265 excl. doors	2000 H × 1000 W × 700 D
03130343	431180	DEK VectorGuard™ cabinet 260/265 incl. doors	2000 H × 1000 W × 700 D
03128717	431191	DEK VectorGuard™ cabinet 265 excl. doors	2000 H × 1000 W × 770 D
03130345	431181	DEK VectorGuard™ cabinet 265 ncl. doors	2000 H × 1000 W × 770 D



DEK VectorGuard™ tower cabinet

- Includes practical hanging runner to store away items quickly and safely
- Holds 100 stencil foils
- Accommodates all common stencil foil sizes
- Stencil foil size 584 mm × 584 mm (23 × 23 inches)
- Stencil foil size 584 mm × 736 mm (23 × 29 inches)
- Stencil foil size 736 mm × 736 mm (29 × 29 inches)

DEK VectorGuard™ TOWER CABINET			
Part number		**Description**	**Size (mm)**
SAP	**DEK**		
03130346	431183	DEK VectorGuard™ tower cabinet without door	2000 H × 1000 W × 700 D
03132623	431182	DEK VectorGuard™ tower cabinet with door	2000 H × 1000 W × 770 D



DEK VectorGuard™ mobile cabinet

- Storage of up to 50 hanging DEK VectorGuard™ stencil foils
- Stencil foils size 584 mm × 584 mm (23 × 23 inches)
- Mobility-enabled with wheel transport and stability brakes; lockable doors
- Cabinet height intentionally designed to enable production line visibility at all times

DEK VectorGuard™ MOBILE CABINET			
Part number		**Description**	**Size (mm)**
SAP	**DEK**		
03130353	431184	DEK VectorGuard™ mobile cabinet	1010 H × 1000 W × 620 D



DEK VectorGuard™ working station

- Swift change of DEK VectorGuard™ stencils directly on the production line
- Lockable, anti-static ESD wheels
- Frame brackets on both cabinet sides for DEK VectorGuard™ frames
- Lockable drawers in three different sizes for organized arrangement of printing tools, for example:
  - Drawer 1: Spatulas, cleaning wipes and swabs, shift plan/ reports
  - Drawer 2: Magnet pins, DEK Grid-Lok™, board clamps, squeegee blades
  - Drawer 3: Cleaning media, precision wipes, dedicated tooling

DEK VectorGuard™ WORKING STATION			
Part number		**Description**	**Size (mm)**
SAP	**DEK**		
03130356	431188	DEK VectorGuard™ working station	928 H × 600 W × 750 D



DEK Mesh-mounted stencils or DEK Precision screens storage system

- Flexible storage solution for mesh-mounted stencils and emulsion screens in different sizes; can also accommodate DEK VectorGuard™ stencils
- Robust, stainless steel working surface to facilitate manual cleaning of stencils, squeegees and spatulas with different cleaning substances
- Multi-functional storage solution with drawer, adjustable panel below the drawer and squeegee bracket holder to store consumables and squeegees
- Anti-static, lockable wheels and doors for easy transportation through the production facility
- Optional 20 stencil/screen storage with no drawer or shelf

DEK MESH-MOUNTED STENCILS OR PRECISION SCREENS STORAGE SYSTEM			
Part number		**Description**	**Size (mm)**
SAP	**DEK**		
03130367	431256	Stencils and screens cabinet	1048 H × 1153 W × 808 D

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Consumables

Boosting throughput and yield for the intelligent factory



Consumables

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Consumables

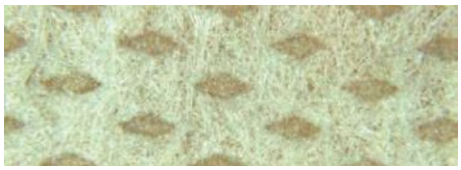
The quality and stability of the printing process greatly impacts efficiency and yield for the entire SMT line. With increasing miniaturization and component diversity, the printing process has become more complex than ever before.

In order to optimize the printing operation and realize the best results technically possible, harmonization of printing equipment, stencils, squeegees, tooling solutions and consumables is required. As the leading print process expert, ASMPT is the world's only equipment supplier that offers a comprehensive portfolio of process support products (PSPs) which enhance printing on DEK platforms, as well as equipment made by other manufacturers.

DEK Ultra-Fine Pitch (UFP) ECO understencil cleaning rolls

DEK UFP ECO rolls are designed to boost productivity and yield, reduce defects and decrease manufacturing costs.





The unique 3D architecture of DEK UFP ECO understencil cleaning rolls counters the risk of contamination as the fabric traps solder paste and solders balls within its pockets. This is a key differentiator from paper-based products that allow paste to remain on the surface of the paper, creating the potential for contamination. Consequently, DEK UFP ECO rolls not only ensure effective understencil cleaning, they also prevent contamination-related defects.

Ideal for ultra-fine-pitch apertures inherent with today's miniaturized devices, DEK UFP ECO rolls ensure a quick and effective clean. The hydrophilic properties of the fibers provide fast wicking, as solvent is delivered through the fabric to the bottom of stencil instantaneously so that cleaning is more thorough and solvent consumption is reduced.

Features and benefits:

- Outstanding cleaning performance
- Reduced solvent consumption by an average of 50%
- Unique 3D structure traps solder particles away from the stencil, removing smear
- Ultra-low linting, Class 1000, ISO6 cleanroom compatible
- Enhanced vacuum performance
- Hydrophilic fiber structure for rapid solvent wicking
- ESD-safe packaging
- Improved process control
- Non-abrasive structure of fabric increases stencil and coating life
- Environmentally-friendly, chloride-free, recyclable
- Faster, more effective cleaning cycle leading to higher throughput

DEK UFP ECO UNDERSTENCIL CLEANING ROLLS

Part number		Platform	Fabric width (mm)	Core width (mm)	Inner core diameter (mm)	Roll max outer diameter (mm)	Roll length (m)
SAP	DEK						
03128525	800071	ASMPT (DEK Micron**)	515	530	19	56	11
03128531	800072	ASMPT (DEK Micron**)	400	530	19	56	11
03130297	800073	ASMPT (DEK Micron**)	300	530	19	56	11
03239913	–	ASMPT (DEK TQ)	420	448	10	77	19
03128585	800074	MPM	443	457	19.5	64	12
03131628	800075	MPM	443	457	19.5	100	44
03131629	800076	MPM	546	559	19.5	64	12
03131630	800077	EKRA	400	400	13	53	10
03131631	800078	EKRA	500	500	13	53	10
03133875	800079	EKRA	420	420	13	53	10
03131632	800080	Panasonic	365	380	19.5	64.5	15
03182714*	800080	Panasonic	365	380	19.5	64.5	15
03131633	800082	Yamaha	440	440	25.5	88	25
03131634	800083	Yamaha	530	530	25.5	88	25
03155072	800084	Yamaha	620	620	25.5	88	25
03149540	800086	EKRA	520	520	13	53	10
03151577	800088	MPM	460	530	19.5	56	10

*With plastic core **DEK Micron = Printer portfolio ranging from DEK Horizon to DEK NeoHorizon

DEK SMT high performance understencil cleaning fabrics

DEK SMT high-performance understencil cleaning fabrics provide effective cleaning and compatibility with multiple print platforms.



Features and benefits:

- Absorbent, vacuum-friendly & fast-wicking
  - Special non-woven fabric construction reduces lint, preventing aperture blockages and contamination
  - Fabric does not compromise vacuum power, optimizing aperture cleaning performance
  - Wicks consistently across the full width of the cleaning roll to ensure even distribution of the cleaning agent for a more productive clean
  - Wick time is extremely fast compared to other cleaning fabrics
- Effective cleaning
  - Dry cycle in addition to Wet (Vac/Dry) cycle
  - Delivers a superior clean for underside of the stencil
- Broad machine compatibility
  - Suitable for ASMPT, MPM, Ekra and other on-board cleaning systems, in addition to advanced understencil cleaners
  - 11 meters minimum length reduces number of changeovers and total changeover time on DEK platforms
  - 44 meter length available for latest MPM platform

DEK SMT HIGH PERFORMANCE UNDERSTENCIL CLEANING FABRICS

Part number		Platform	Fabric width (mm)	Core width (mm)	Roll max diameter (mm)	Inner core (mm)	Roll length (m)
SAP	DEK						
03127081	176215	ASMPT (DEK Micron**)	515	530	58	19	11
03128524	176216	ASMPT (DEK Micron**)	400	530	58	19	11
03128532	176217	ASMPT (DEK Micron**)	300	530	58	19	11
03128523	173826*	ASMPT (DEK Micron**)	515	530	58	19	11
03128538	431524	ASMPT (DEK Micron**)	607	620	58	19	11
03233780		ASMPT (DEK Micron**)	625	635	58	19	11
03217296	–	ASMPT (DEK TQ)	420	448	77	10	~ 22
03252411	–	ASMPT (DEK TQ L)	515	530	77	19.75	22
03252072	–	ASMPT (DEK TQ L)	580	608	77	19.75	22
03131502	173451	AP series, UP series, SPM, MPM125, Accela, Momentum	320	457	64	19	12
03131501	173450	AP series, UP series, SPM, MPM125, Accela, Momentum	443	457	64	19	12
03139825	178911	AP series, UP series, SPM, MPM125, Accela, Momentum	597	622	64	19	12
03131512	178864	Accela, Momentum	443	457	100	19	44
03144221	178909	Accela, Momentum	546	559	100	19	44
03128533	178908	All Ekra In - Line printers	400	400	53	13	10
03131513	178907	All Ekra In - Line printers	500	500	53	13	10

*With metalised anti-static packaging. **DEK Micron = Printer portfolio ranging from DEK Horizon to DEK NeoHorizon

DEK Pro and DEK Pro XF advanced understencil cleaning chemistries

Designed specifically for understencil cleaning, DEK Pro and DEK Pro XF improve process performance and reduce print defects. They are safer, cleaner and more environmentally friendly than IPA and traditional solvent cleaners, and are compliant with all industry standards and environmental regulations.



Features and benefits:

- Prioritizes health, safety and the environment
  - DEK Pro XF has no flash point and is low VOC
  - DEK Pro has a high flash point of 67º C (IPA flash point is 12º C)
  - Safer to use, transport, store and dispose
  - Manufactured using biodegradable materials
- Reduce print defects
  - No impact on thixotropic properties of the solder paste
  - Reduce risk of solder slump and solder balling
  - Residue-free after evaporation
- Compliant and compatible
  - Compatible with all solder paste materials
  - RoHS and REACH compliant

DEK PRO ADVANCED UNDERSTENCIL CLEANING CHEMISTRIES				
Part number		**Description**	**Volume**	**Available for**
SAP	**DEK**			
03129706	173483	DEK Pro cleaning agent	1 liter	Vacuum and non vacuum printers and manual cleaning
03129708	173485	DEK Pro cleaning agent	5 liters	Vacuum and non vacuum printers and manual cleaning
03130223	431093	DEK Pro cleaning agent	20 liters	Vacuum and non vacuum printers and manual cleaning

DEK PRO XF ADVANCED UNDERSTENCIL CLEANING CHEMISTRIES				
Part number		**Description**	**Volume**	**Available for**
SAP	**DEK**			
03130225	431513	DEK Pro XF cleaning agent	1 liter	Vacuum printers
03126194	431514	DEK Pro XF cleaning agent	5 liters	Vacuum printers

Pre-saturated wipes

Designed for fast and effective cleaning of stencil surfaces, adhesives and general cleaning applications, pre-saturated cleaning wipes are ideal for quick clean-up on the line.



DEK Hand cleaner wipes

Pre-saturated, disposable DEK Hand cleaner wipes are designed for use in any environment where cleanliness is required for handling critical components. The environmentally-safe, citrus-scented, low- linting wipes are easily dispensed and dry quickly after application.

DEK IPA/DI wipes

DEK low-residue, rapid evaporation pre-saturated wipes are ideal for general cleaning applications. The cleaning solution is comprised of 70% Isopropyl alcohol and 30% de-ionized water and is excellent for removal of fluxes, light oils, polar soils and white mineral residue.

NEW: DEK IPA/DI 96% wipes

New IPA 96% wipes for even lower residue, even faster evaporation pre-saturated wipes are ideal for general cleaning applications. The cleaning solution is comprised of 96% Isopropyl alcohol and 4% de-ionized water and is excellent for removal of fluxes, light oils, polar soils and white mineral residue.

DEK Stencil cleaner wipes

Designed for fast, efficient surface cleaning of stencils and screens, DEK Stencil cleaner wipes are non-abrasive and pre-saturated with hydro-treated Naphtha, which effectively cleans most commercial solder pastes and inks.

DEK Adhesive remover wipes

DEK Adhesive remover wipes clean adhesives from the surface of stencils and screens. Specifically designed for use in SMT processes, the wipes are compatible with most commercial adhesives.

DEK HAND CLEANER WIPES

Part number		Description	Unit	Box quantity
SAP	DEK			
03128534	115809	Hand clean wipes, 1 tub contains 100 wipes	Per tub	6 tubs
03132440	173280	Hand clean wipes refill, 1 pack contains 100 wipes	Per pack	10 packs

DEK IPA/DI WIPES (70% ISOPROPYL ALCOHOL 30% DE-IONISED WATER)

Part number		Description	Unit	Box quantity
SAP	DEK			
03126895	115806	IPA/DI wipes,1 tub contains 100 wipes	Per tub	6 tubs
03129703	173277	IPA/DI wipes refill, 1 pack contains 100 wipes	Per pack	10 packs

DEK IPA/DI WIPES 96-4 (96% ISOPROPYL ALCOHOL 4% DE-IONISED WATER)

Part number		Description	Unit	Box quantity
SAP	DEK			
03178114	-	IPA/DI 96% wipes,1 tub contains 100 wipes	Per tub	6 tubs
03178115	-	IPA/DI 96% wipes refill, 1 pack contains 100 wipes	Per pack	10 packs

DEK STENCIL CLEANER WIPES

Part number		Description	Unit	Box quantity
SAP	DEK			
03128526	115807	Stencil clean wipes, 1 tub contains 100 wipes	Per tub	6 tubs
03132439	173278	Stencil clean wipes refill, 1 pack contains 100 wipes	Per pack	10 packs

DEK ADHESIVE REMOVER WIPES

Part number		Description	Unit	Box quantity
SAP	DEK			
03126751	115808	Adhesive remover wipes, 1 tub contains 100 wipes	Per tub	6 tubs
03128535	173279	Adhesive remover wipes refill,1 pack contains 100 wipes	Per pack	10 packs

Cleaning sprays

ASMPT's maintenance cleaners have been designed to facilitate convenient cleaning of electronics assembly applications for improved productivity at the lowest possible cost.



DEK SMT stencil cleaner

A powerful and versatile, non-corrosive and residue-free cleaner suitable for stencils, webbing, frames and misprinted boards, DEK SMT stencil cleaner's hybrid formulation blends safe and non-flammable water-based ingredients with aggressive long-chain alcohol solvents.

Applications:

- Solder pastes, epoxies and inks
- Manual cleaning
- Automated understencil wipes
- Unheated ultrasonic cleaning systems
- Cold dip tanks
- Safe on all metals, synthetics, plastics and elastomers

DEK SMT STENCIL CLEANER			
Part number		**Description**	**Unit**
SAP	**DEK**		
03129695	173009	Can 470 ml (340 g/12 oz), standard case quantity 10 cans	Each
03134003	173042	1 US gallon (4 liters) refill	Each



DEK Reflow oven cleaner

This robust cleaner is a high-performance mix of water, alkaloids and long-chain alcohols to remove burned-on fluxes and residues. The DEK Reflow oven cleaner formulation uses residual oven heat to boost cleaning power, reducing cleaning time by as much as 50% and preventing flux curing. The cleaner is non-flammable, quick-drying and ozone-safe.

Applications:

- Wave soldering machines
- Relow ovens
- Pick and place systems
- Metal pallets
- Heating elements
- Bafles & clamps
- Chains, pulleys, drive gears and housings

DEK REFLOW OVEN CLEANER			
Part number		**Description**	**Unit**
SAP	**DEK**		
03134011	173012	Can 470 ml (340 g/12 oz), standard case quantity 10 cans	Each
03134002	173045	1 US gallon (4 liters) refill	Each

Gloves



DEK Latex gloves

Powder-free, polymer-coated, latex gloves combine economical single use protection from most acids and bases with comfort and flexibility. The proprietary Miracle Grip polymer coating offers a significantly enhanced wet/dry grip with excellent sensitivity.

Features and benefits:

- Comfort, tactile sensitivity and ergonomic fit
- Go on easily, minimize skin-latex contact
- Maximize wet or dry grip
- Resist roll down
- Meet recognized tests and regulatory requirements

DEK LATEX GLOVES			
Part number		**Description**	**Unit**
SAP	**DEK**		
03134009	173015	9″ polymer coated latex glove/MED	Bag with 50 pairs
03134008	173016	9″ polymer coated latex glove/LG	Bag with 50 pairs
03134010	173017	9″ polymer coated latex glove/XL	Bag with 50 pairs



DEK Powder-free blue nitrile gloves

The affordable choice for consistency, performance and reliability, DEK nitrile gloves are manufactured to ensure a tough, durable glove, free of chemical odors and harsh, irritating deodorants. Stronger than either comparable latex or PVC/vinyl gloves, blue nitrile gloves provide excellent splash and contact protection from a wide range of chemicals. Textured palms and fingers offer exceptional wet or dry grip.

Features and benefits:

- Pure, 100% nitrile polymer; absolutely no natural rubber latex proteins
- Medical grade for top performance
- Comfortable – flexible silky feel eliminates the tiring, constant hand pressure of latex gloves
- Rugged – three times more puncture resistant than vinyl or natural rubber latex gloves of equal thickness
- Economical – outperforms PVC and latex for reduced overall glove consumption

DEK POWDER-FREE BLUE NITRILE GLOVES			
Part number		**Description**	**Unit**
SAP	**DEK**		
03134006	173018	9″ powder free blue nitrile glove/SM	Box with 50 pairs
03134005	173019	9″ powder free blue nitrile glove/MED	Box with 50 pairs
03129696	173020	9″ powder free blue nitrile glove/LG	Box with 50 pairs
03134004	173021	9″ powder free blue nitrile glove/XL	Box with 50 pairs

High-purity precision cleaning dry wipes

DEK wipes feature non-woven and polyester technologies to maximize effectiveness and prevent contamination. They are designed, manufactured and packaged with precision to serve various cleaning and maintenance requirements.



DEK Non-woven material wipes

DEK Non-woven material wipes are made from a unique blend of cellulose and polyester to provide maximum absorbency, low particle generation and affordability. Most of the DEK Non-woven wipes are packaged in a cleanroom for use in Class 100 applications.

DEK Polyester material wipes

DEK Polyester material wipes are perfect for cleanroom applications – including optical work. The wipes are pre-cut and packaged in a cleanroom for use in Class 10 environments. Polyester wipes provide superior scrubbing capability with no lint left behind.

DEK HIGH-PURITY PRECISION CLEANING DRY WIPES			
Part number		**Description**	**Unit**
SAP	**DEK**		
03134066	115825	Wipes, med absorb, poly blend (15 × 15 cm)	Bag 50
03134065	115826	Wipes, med absorb, poly blend (23 × 23 cm)	Bag 300
03134063	115829	Wipes, quilted absorb, (20 × 20 cm)	Bag 100
03130306	431088R	Cleanroom dry wipes 23 × 23 cm / 9″ × 9″	Bag 150

Precision swabs

DEK Precision swabs are designed, manufactured and packaged to provide high-quality, economical solutions for various cleaning and maintenance requirements in SMT and clean room applications, or anywhere that cleaning is directly related to accuracy.



DEK Precision swabs have tips that are heat-sealed to the handles to avoid contamination and adhesive compatibility issues. The materials have been selected to provide the best flexibility and durability.

DEK Foam swabs

The foam swab is an excellent general-purpose swab for cleaning small and confined areas. Its laundered foam head possesses good absorbing capacity and cushioning. A compact, rigid handle and round internal head core provide firm support.

DEK PRECISION SWABS			
Part number		**Description**	**Unit**
SAP	**DEK**		
03134060	115840	Swab, foam LG. PDLE. HD 16 × 25 mm, L-13 cm	Bag 50
03134059	115841	Swab, foam SLM - HD 12 × 25 mm, L-12 cm	Bag 50
03134058	115842	Swab, foam NRW - HD 4 × 12 mm, L- 9 cm	Bag 50
03134057	115843	Swab, foam MED - HD 6 × 19 mm, L-11 cm	Bag 50
03128530	431415	Cleanroom foam swab, ESD handle	Bag 25
03128545	431416	Cleanroom foam swab, ESD handle	Bag 100

DEK Spatulas

DEK Spatulas are color-coded to ensure isolated use with appropriate materials and are an essential tool on the line. Light and durable, the polypropylene spatulas are shatterproof and flexible for long-lasting performance.



Features and benefits:

- Constructed of durable polypropylene
- Shatterproof and flexible
- Easy to grip
- Less likely than metal spatulas to scratch the stencil surface
- Easily cleaned with DEK pre-saturated wipes
- Wide blade width for more efficient clearing of solder paste

Available in two, color-coded versions:

- Lead-free green
- Anti-static black

DEK SPATULAS			
Part number		**Description**	**Unit**
SAP	**DEK**		
03128559	173788	Green spatula	Bag of 5
03129776	173825	Black ESD spatula	Bag of 5

DEK Solder paste nozzles

DEK Solder paste nozzles have been designed to facilitate solder paste cartridge changeover more cleanly and efficiently than conventional re-usable nozzles.





DEK Solder paste nozzles easily snap into place, making the cartridge immediately ready for use with on-board printer auto-dispense technologies. These easy-to-use nozzles eliminate clean-up of internal threads and solder paste drip, which are common side effects of threaded dispense tip installation.

With this unique design, manufacturers can reduce process costs, lower material waste and limit operator intervention.

Features and benefits:

- Color-coded: Visual identification of leaded and lead-free solder pastes.
- Non-drip: Paste flow is more controlled and excess material reduced; 'X' low profile promotes paste mixing during solder bead deposition.
- Disposable: Simple, reduced-cost nozzles can be disposed of with the empty solder paste tube. Eliminates messy, time-consuming nozzle changes. Compatible with SEMCO® type paste tubes.
- Low waste and anti-mix strategy compliant: Compact format reduces the amount of paste 'in transit' through the nozzle. Disposable design ensures no cross contamination of paste types.

DEK SOLDER PASTE NOZZLES			
Part number		**Description**	**Unit**
SAP	**DEK**		
03131635	800120	Paste nozzles green (lead-free)	500
03131636	800125	Paste nozzles red (lead-rich)	500
03128678	800121	Paste nozzles green evaluation pack	25
03128629	800126	Paste nozzles red evaluation pack	25
03153616	-	Paste nozzles black for jar dispenser	25

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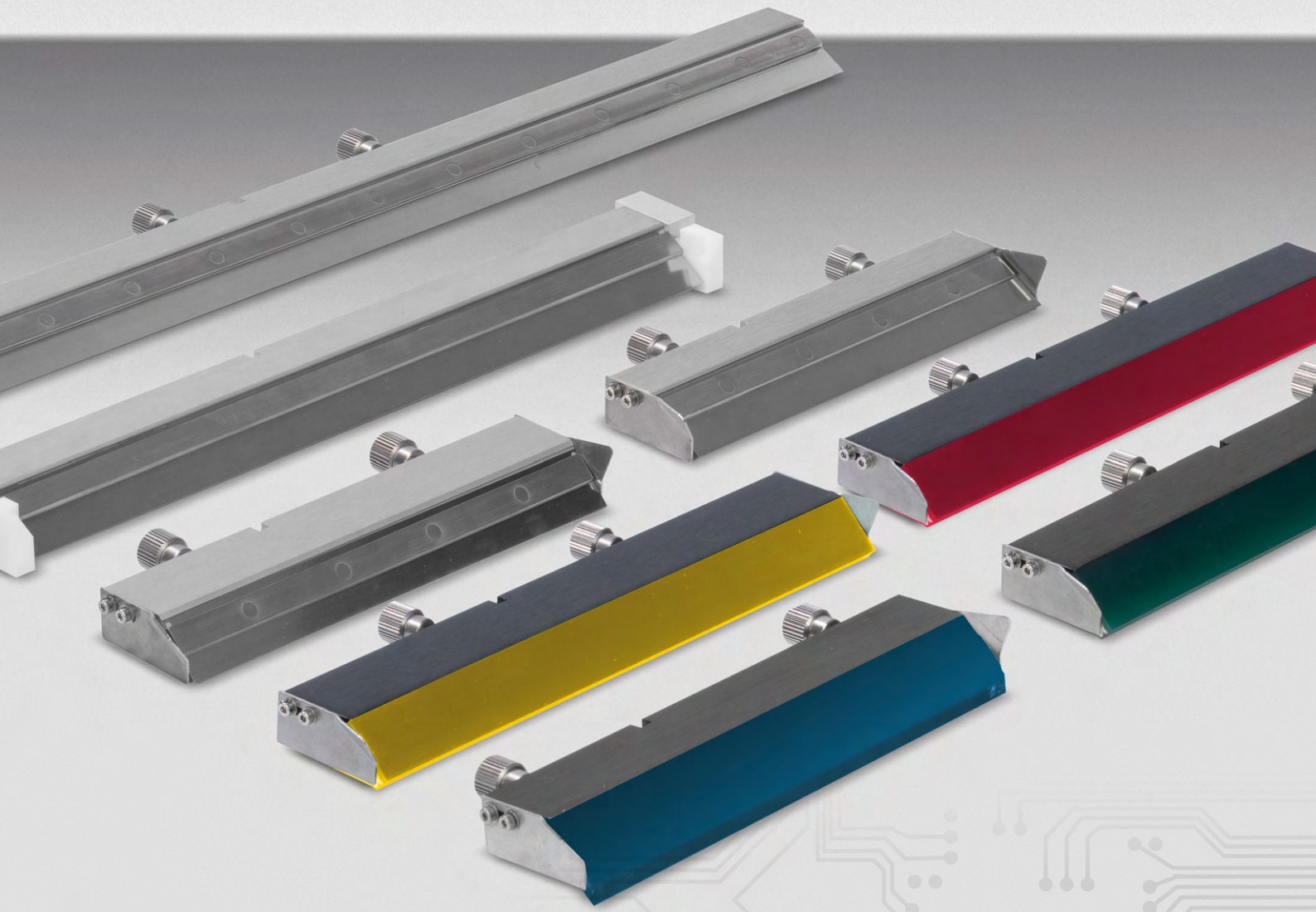

Squeegees

Enabling a perfect print process



Squeegees

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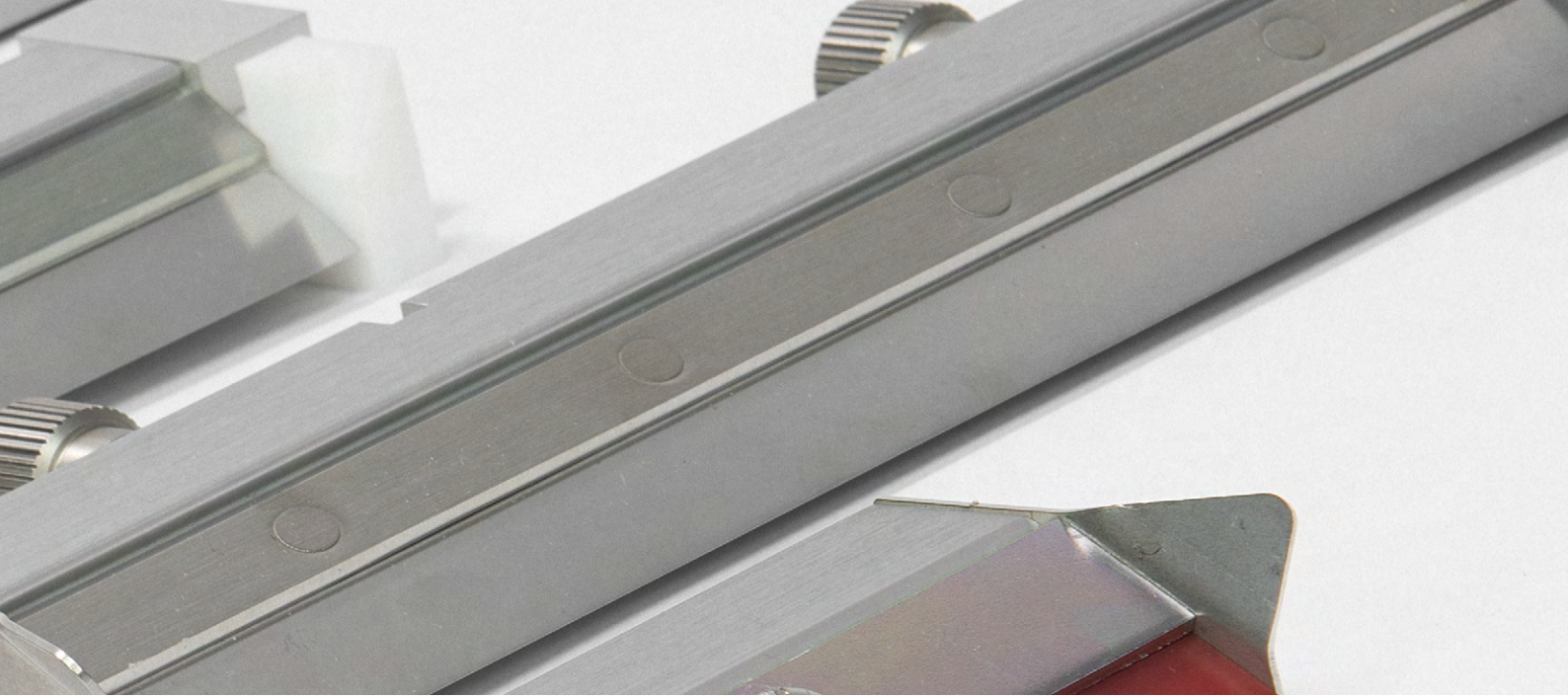


Squeegees

The integrity of the squeegee blade in the solder paste printing operation is essential to optimal material deposition. ASMPT ensures its DEK squeegee blades are manufactured to exacting standards for maximum lifetime and excellent in-use performance.

Squeegee characteristics including blade material, flexibility, angle of attack and mounting mechanism have a significant effect on printing process control. Aligning the proper squeegee to the application is made more simple with ASMPT's comprehensive range of polyurethane and stainless steel blades, bonded or clamped mounting options and choice of 45° or 60° printing angle.

DEK Polyurethane squeegees

Polyurethane squeegees satisfy single thickness or multi-level (step) stencil applications. The hardness of the squeegee is dependent on the stencil construction: choose harder squeegees (97 durometer and above) for durable, low abrasion performance with single thickness stencils and a softer squeegee (70 to 94 durometer) for multi-level stencils.

Available in hardness ranges up to 120 durometer, DEK Polyurethane squeegees are manufactured of the highest-quality material and can be re-ground to maintain a sharp edge throughout the squeegee lifetime. DEK Polyurethane squeegees are also available for DEK PumpPrint™ / Adhesive stencils, mesh and emulsion screen printing applications.

Stainless steel squeegees

The most widely used for SMT printing with metal stencils, particularly for heterogeneous assemblies, DEK Stainless Steel squeegees are well-suited for applications that feature a mix of large, standard and fine-pitch components or in cases where PCB panel flatness cannot be confirmed. The wider pressure window of DEK Stainless Steel stencils provides excellent consistency and minimal wear.

DEK Stainless Steel metal squeegees are available with two different angles and overhangs (free moving plate length without support of the squeegee holder) to enable different aperture paste filling requirements. The standard recommended angle is 60° for a normal paste filling of the apertures, while an angle of 45° will add more pressure to fill the apertures for paste-intensive applications such as pin-in-paste.

Bonded / clamped mounting mechanisms

Mounting options for DEK Squeegees include bonding or clamping. The mounting selection should take into consideration the specific application, squeegee type and printing operation. Clamping allows squeegees to be easily interchanged and adjustments to blade flexibility and durometer to be made based on application requirements.This mounting method is particularly well-suited for stainless steel and composite blades.

Bonded squeegee assembly guarantees blade straightness for high durometer polyurethane blades and allows exploitation of the squeegee’s process advantages.

DEK Metal squeegees



METAL CLAMPED SQUEEGEES 60° ~ 6 MM OVERHANG			
Part number			
SAP	**DEK**	**Size**	**Unit**
88SQA310	SQA310	170 mm	Pair
88SQA311	SQA311	200 mm	Pair
88SQA312	SQA312	250 mm	Pair
88SQA313	SQA313	300 mm	Pair
88SQA314	SQA314	350 mm	Pair
88SQA315	SQA315	400 mm	Pair
88SQA316	SQA316	440 mm	Pair
88SQA317	SQA317	483 mm	Pair
88SQA318	SQA318	510 mm	Pair
88SQA319	SQA319	535 mm	Pair
03130508	SQA479	610 mm	Pair

45° METAL CLAMPED SQUEEGEES			
Part number			
SAP	**DEK**	**Size**	**Unit**
88SQA350	SQA350	170 mm	Pair
88SQA351	SQA351	200 mm	Pair
88SQA352	SQA352	250 mm	Pair
88SQA353	SQA353	300 mm	Pair
88SQA354	SQA354	350 mm	Pair
88SQA355	SQA355	400 mm	Pair
88SQA356	SQA356	440 mm	Pair
88SQA357	SQA357	483 mm	Pair
88SQA358	SQA358	510 mm	Pair
88SQA359	SQA359	535 mm	Pair
03130509	SQA480	610 mm	Pair

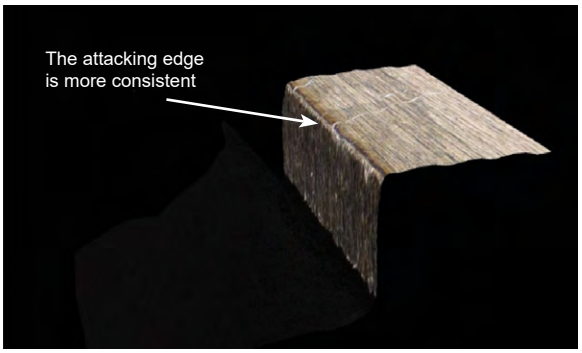
METAL CLAMPED SQUEEGEES 60° ~ 15 MM OVERHANG			
Part number			
SAP	**DEK**	**Size**	**Unit**
88SQA300	SQA300	170 mm	Pair
88SQA301	SQA301	200 mm	Pair
88SQA302	SQA302	250 mm	Pair
88SQA303	SQA303	300 mm	Pair
88SQA304	SQA304	350 mm	Pair
88SQA305	SQA305	400 mm	Pair
88SQA306	SQA306	440 mm	Pair
88SQA307	SQA307	483 mm	Pair
88SQA308	SQA308	510 mm	Pair
88SQA309	SQA309	535 mm	Pair
03264271	-	560 mm	Pair
03264296	-	575 mm	Pair
03130443	SQA478	610 mm	Pair
03130444	SQA489	580 mm	Pair
03140800	SQA542	635 mm	Pair

DEK Laser cut replacement squeegees blades

The new generation of laser cut squeegee replacement blades ensuring an improved paste transfer with little to no paste smearing. Reduces both defect count and operator intervention. Produced with an optimised laser setup to ensure the highest quality, reliability, repeatability and accuracy.

Features and benefits:

- Reduced paste smear
- More consistent paste roll control
- Reduced cleaning frequency
- Short lead times

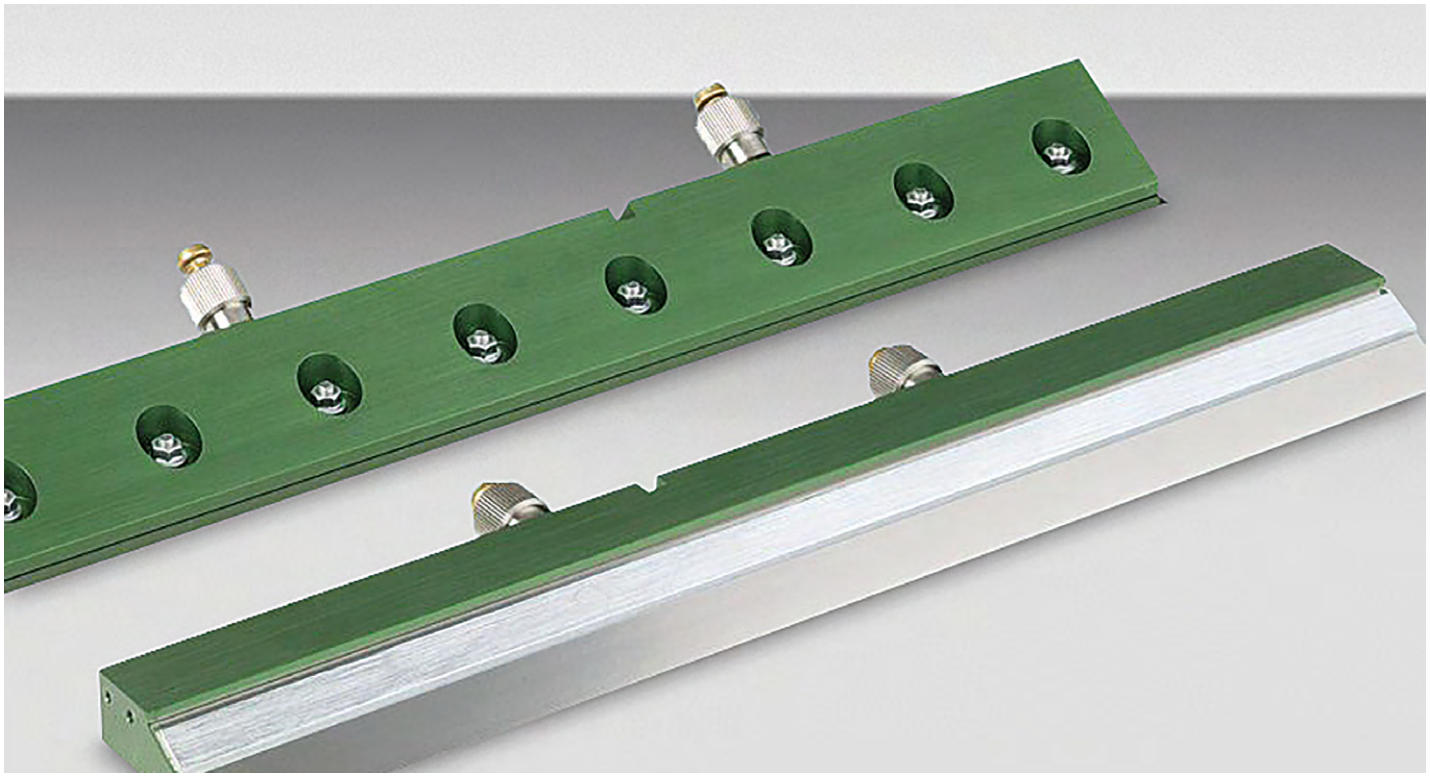


60° REPLACEMENT LASER CUT BLADES			
Part number			
SAP	**DEK**	**Size**	**Unit**
03165892	129924	170 mm	Each
03165893	129925	200 mm	Each
03165894	133584	250 mm	Each
03165895	133585	300 mm	Each
03165896	129926	350 mm	Each
03165897	133586	400 mm	Each
03165898	129927	440 mm	Each
03165899	133587	483 mm	Each
03165900	133588	510 mm	Each
03165901	129928	535 mm	Each
03264122	-	560 mm	Each
03264188	-	575 mm	Each

45° REPLACEMENT LASER CUT BLADES			
Part number			
SAP	**DEK**	**Size**	**Unit**
03166893-01	133601	170 mm	Each
03168405-01	133602	200 mm	Each
03168555-01	133603	250 mm	Each
03168791-01	133604	300 mm	Each
03169303-01	133605	350 mm	Each
03169341-01	133606	400 mm	Each
03169513-01	133607	440 mm	Each
03170087-01	133608	483 mm	Each
03170351-01	133609	510 mm	Each
03172721-01	133610	535 mm	Each

ADDITIONAL OPTIONS FOR BLADES		
Part number		
SAP	**Options**	**Remark**
00153013-01	Sqy Blade Milling	Reduced thickness/smoothen blade edge for flexibility with step stencils
00153014-01	Sqy Blade Slit	Vertical slit for step stencils
00153015-01	Sqy Blade Engraving	Blade with engraving for traceability and product verification e.g., QR code, barcode

DEK Metal squeegees for lead free applictions



LEAD FREE REPLACEMENT BLADES (FIT BOTH 60° AND 45°)			
Part number			
SAP	**DEK**	**Size**	**Unit**
03130219	431001	200 mm	Each
03128589	431002	250 mm	Each
03130220	431003	300 mm	Each
03128577	431004	350 mm	Each
03130221	431005	400 mm	Each
03130340	431006	440 mm	Each
03143610	-	483 mm	Each

LEAD FREE METAL CLAMPED SQUEEGEES 60° ~ 6 MM OVERHANG			
Part number			
SAP	**DEK**	**Size**	**Unit**
03130452	SQAG311	200 mm	Pair
03130453	SQAG312	250 mm	Pair
03130454	SQAG313	300 mm	Pair
03128618	SQAG314	350 mm	Pair
03130455	SQAG315	400 mm	Pair
03130456	SQAG316	440 mm	Pair

- Anodised Green
- Chromium Blades (CrN) ~ 1.5 microns

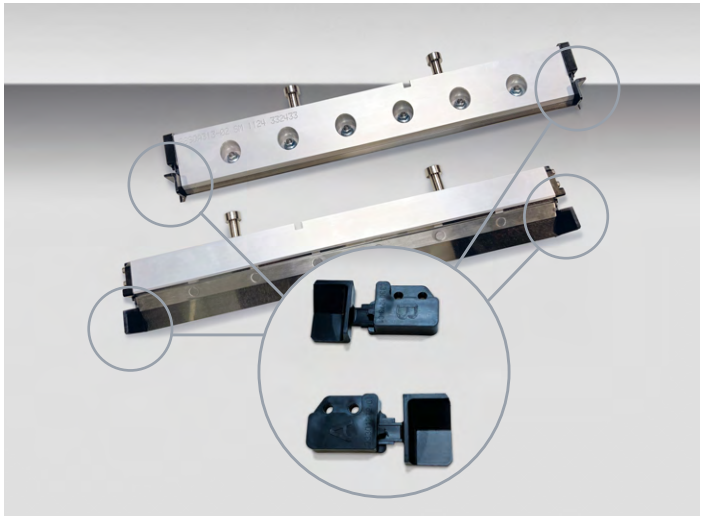
LEAD FREE METAL CLAMPED SQUEEGEES 60° ~ 15 MM OVERHANG			
Part number			
SAP	**DEK**	**Size**	**Unit**
03130447	SQAG301	200 mm	Pair
03130448	SQAG302	250 mm	Pair
03130449	SQAG303	300 mm	Pair
03128716	SQAG304	350 mm	Pair
03130450	SQAG305	400 mm	Pair
03130451	SQAG306	440 mm	Pair
03141830	SQAG307	483 mm	Pair

- Anodised Green
- Chromium Blades (CrN) ~ 1.5 microns

DEK Self Adjusting Paste Deflectors (SAPDs)

SAPDs enable the customer to change the print pressure without needing to adjust the height of the paste deflectors reducing risk of stencil damage and reducing cost through lessening material waste.





*Consumable SAPD

SAPDs are ideal for solder paste printing on SMT boards with pressure forces between 0 and 20 kg to improve the level of process control and reduce solder paste waste. The profile and structure of the deflectors ensure that the paste does not escape outward during the printing process. This cuts down on wasted paste (faster ROI) and drastically reduces printing problems resulting from dried paste on the edges. The bottom line: more performance from the first print to the last.

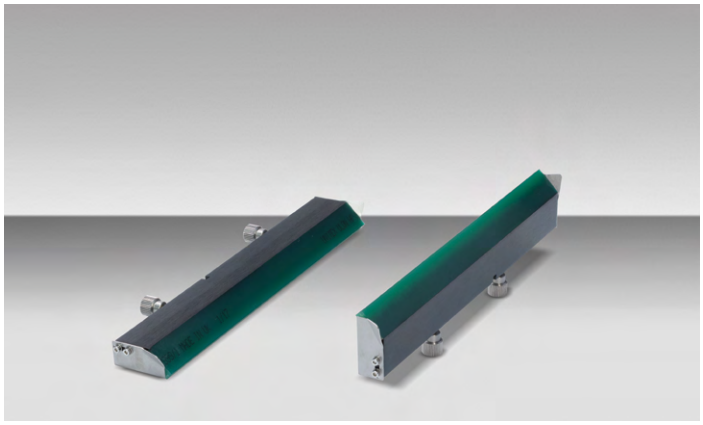
There is no set up required per product, so risk of stencil coining due to product changeover is eliminated. The deflectors can be removed from the assembly without the need of tools with the simple 'clip-in' design, therefore increasing cleanliness of the squeegee/ deflector interface.

Features and benefits:

- Drastically reduction of paste wastage through much reduced tram lines.
- Fast Return on Invest because of much reduced paste wastage
- More consistent paste roll
- Reduced operator intervention
- Increased ease of cleaning
- Less risk of cross-contamination due to their enclosed system, ease of cleaning and ability to 'clip' in new deflectors per product.
- Suitable for metal squeegees and lead free squeegees
- Self-levelling across print pressure range
- No coining of stencil
- Environmentally friendly & recyclable, ESD*

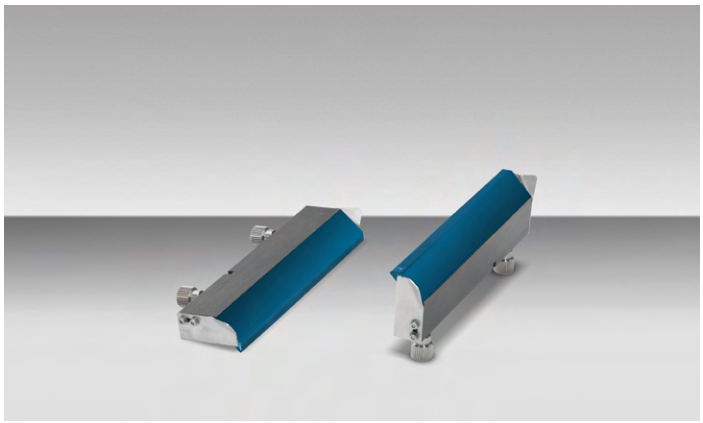
DEK SELF ADJUSTING PASTE DEFLECTORS (SAPD)			
Part number			
SAP	**DEK**	**Description**	**Unit**
03162490-01	602428*1	Self adjusting paste deflectors MPU (2 × left hand, 2 × right hand)	Set of 4
03162487-01	226587	Paste deflector kit	Set of 4
03162489-01	225974	Left hand paste deflector	Each
03162488-01	225973	Right hand paste deflector	Each
03305088	-	Consumable SAPD, ESD*	Set of 4

DEK Polyurethane squeegees

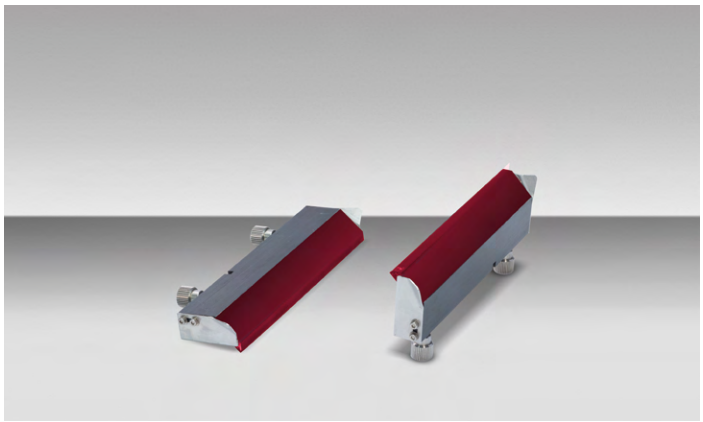


POLYURETHANE BONDED SQUEEGEES GREEN 70-75 SHORE HARDNESS ~ 45°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03136509	SQA248	100 mm	Pair
03130492	SQA254	150 mm	Pair
03130403	SQA161	170 mm	Pair
03130488	SQA167	200 mm	Pair
03130406	SQA174	250 mm	Pair
03130398	SQA152	300 mm	Pair
03130408	SQA185	350 mm	Pair
03142810	SQA190	400 mm	Pair
03138030	SQA201	440 mm	Pair
03130490	SQA210	483 mm	Pair
03142818	SQA219	510 mm	Pair
03141708	SQA231	535 mm	Pair

POLYURETHANE BONDED SQUEEGEES GREEN 70-75 SHORE HARDNESS ~ 60°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03134708	SQA260	100 mm	Pair
03130494	SQA266	150 mm	Pair
03142810	SQA119	170 mm	Pair
03131308	SQA120	200 mm	Pair
03128791	SQA139	250 mm	Pair
03130400	SQA155	300 mm	Pair
03128789	SQA121	350 mm	Pair
03130409	SQA196	400 mm	Pair
03130391	SQA122	440 mm	Pair
03131649	SQA136	483 mm	Pair
03142819	SQA225	510 mm	Pair
03138819	SQA123	535 mm	Pair



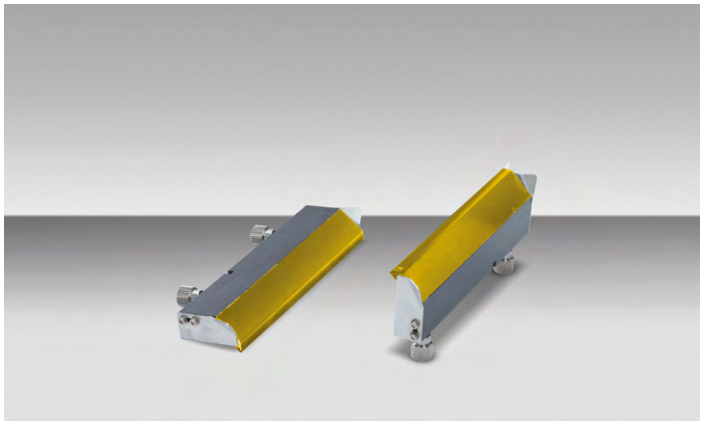
POLYURETHANE BONDED SQUEEGEES BLUE 75-80 SHORE HARDNESS ~ 45°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03142348	SQA247	100 mm	Pair
03131654	SQA253	150 mm	Pair
03131650	SQA160	170 mm	Pair
03130404	SQA166	200 mm	Pair
03131651	SQA173	250 mm	Pair
03142286	SQA151	300 mm	Pair
03130407	SQA184	350 mm	Pair
03131652	SQA189	400 mm	Pair
03142811	SQA200	440 mm	Pair
03142815	SQA209	483 mm	Pair
03142817	SQA218	510 mm	Pair
03141707	SQA230	535 mm	Pair



POLYURETHANE BONDED SQUEEGEES BLUE 75-80 SHORE HARDNESS ~ 60°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03130493	SQA259	100 mm	Pair
03136233	SQA265	150 mm	Pair
03130392	SQA124	170 mm	Pair
03130393	SQA125	200 mm	Pair
03130396	SQA138	250 mm	Pair
03128686	SQA154	300 mm	Pair
03130394	SQA126	350 mm	Pair
03130489	SQA195	400 mm	Pair
03128715	SQA127	440 mm	Pair
03130483	SQA131	483 mm	Pair
03130491	SQA224	510 mm	Pair
03141770	n.a.	535 mm	Pair
03141569	SQA487	580 mm	Pair
03141884	SQA483	610 mm	Pair

POLYURETHANE BONDED SQUEEGEES PINK 94-97 SHORE HARDNESS ~ 45°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03142884	SQA246	100 mm	Pair
03142226	SQA252	150 mm	Pair
03130486	SQA159	170 mm	Pair
03142232	SQA140	200 mm	Pair
03139258	SQA172	250 mm	Pair
03130485	SQA150	300 mm	Pair
03142820	SQA229	350 mm	Pair
03130484	SQA147	400 mm	Pair
03142875	SQA130	440 mm	Pair
03142814	SQA208	483 mm	Pair
03142880	SQA217	510 mm	Pair
03142820	SQA229	535 mm	Pair

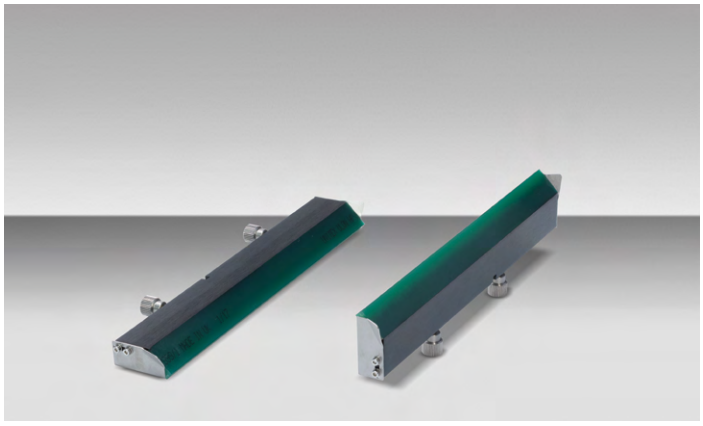
POLYURETHANE BONDED SQUEEGEES PINK 94-97 SHORE HARDNESS ~ 60°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03141449	SQA258	100 mm	Pair
03130411	SQA264	150 mm	Pair
03130389	SQA117	170 mm	Pair
03137799	SQA113	200 mm	Pair
03130395	SQA137	250 mm	Pair
03130399	SQA153	300 mm	Pair
03131648	SQA110	350 mm	Pair
03139906	SQA194	400 mm	Pair
03139907	SQA116	440 mm	Pair
03142876	SQA132	483 mm	Pair
03142882	SQA223	510 mm	Pair
03142874	SQA112	535 mm	Pair
03141571	SQA491	580 mm	Pair
03141883	SQA482	610 mm	Pair



POLYURETHANE BONDED SQUEEGEES YELLOW 120 SHORE HARDNESS ~ 45°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03142821	SQA245	100 mm	Pair
03136182	SQA251	150 mm	Pair
03130401	SQA158	170 mm	Pair
03142806	SQA141	200 mm	Pair
03142877	SQA171	250 mm	Pair
03142808	SQA178	300 mm	Pair
03142228	SQA142	350 mm	Pair
03142809	SQA188	400 mm	Pair
03142257	SQA199	440 mm	Pair
03142813	SQA207	483 mm	Pair
03142816	SQA216	510 mm	Pair
03142883	SQA228	535 mm	Pair

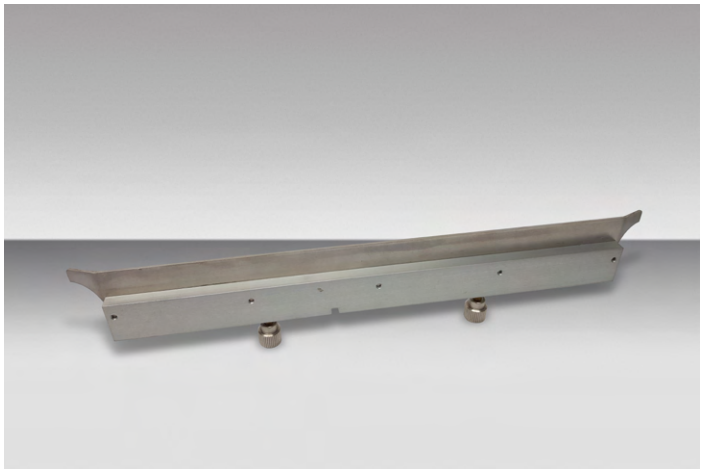
POLYURETHANE BONDED SQUEEGEES YELLOW 120 SHORE HARDNESS ~ 60°			
Part number			
SAP	**DEK**	**Size**	**Unit**
03142885	SQA257	100 mm	Pair
03142306	SQA263	150 mm	Pair
03130487	SQA164	170 mm	Pair
03131336	SQA168	200 mm	Pair
03142878	SQA177	250 mm	Pair
03131337	SQA181	300 mm	Pair
03131338	SQA186	350 mm	Pair
03131653	SQA193	400 mm	Pair
03142812	SQA204	440 mm	Pair
03142879	SQA213	483 mm	Pair
03142881	SQA222	510 mm	Pair
03131339	SQA234	535 mm	Pair

DEK PumpPrint™ squeegees



DEK PUMPPRINT™ SQUEEGEES FOR GLUE PRINTING			
Part number			
SAP	**DEK**	**Size**	**Unit**
03142822	SQA455	170 mm	Pair
03130505	SQA456	200 mm	Pair
03130439	SQA457	250 mm	Pair
03130440	SQA458	300 mm	Pair
03130441	SQA459	350 mm	Pair
03130442	SQA460	400 mm	Pair
03130506	SQA461	440 mm	Pair
03130507	SQA462	483 mm	Pair
03142202	SQA463	510 mm	Pair
03142823	SQA464	535 mm	Pair

DEK Special squeegees



In addition to the standard stainless steel and rubber squeegees, ASMPT offers a variety of other types of squeegees for applications such as:

- Screen prinitng
- Wafer coating

SPECIAL SQUEEGEES					
Part number					
SAP	**DEK**	**Size**	**Description**	**Application**	**Unit**
3141152	208226	180 mm	Diamond squeegee blade 9.5 mm Polyurethane, RED	Screen printing	Each
3141953	213699*	180 mm	Diamond squeegee blade 9.5 mm Polyurethane, Blue	Screen printing	Each
3141511	SQA102	200 mm	Diamond squeegee with Polyurethane Blade, Pink	Screen printing	Each
3141603	SQA104	350 mm	Diamond squeegee with Polyurethane Blade, Pink	Screen printing	Each
3141062	FBA062	450 mm	Flood bar squeegee incl. stainless steel blade	Screen printing	Each
3139877	FBA047	170 mm	Flood bar squeegee incl. stainless steel blade	Screen printing	Each
3130445	SQA544	250 mm	Half round squeegee assembly	Semiconductor like wafer coating	Each
3130446	SQA545	330 mm	Half round squeegee assembly	Semiconductor like wafer coating	Each
3144432	S4922	350 mm	Polyurethane replacement blade for Diamond squeegee, Green	Screen printing	Each
3141668	163424	450 mm	Replacement blade for flood squeegee assembly	Screen printing	Each
3161783	107805	535 mm	Replacement blade for flood squeegee assembly	Screen printing	Each

* Only compatible for Eclipse printers

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