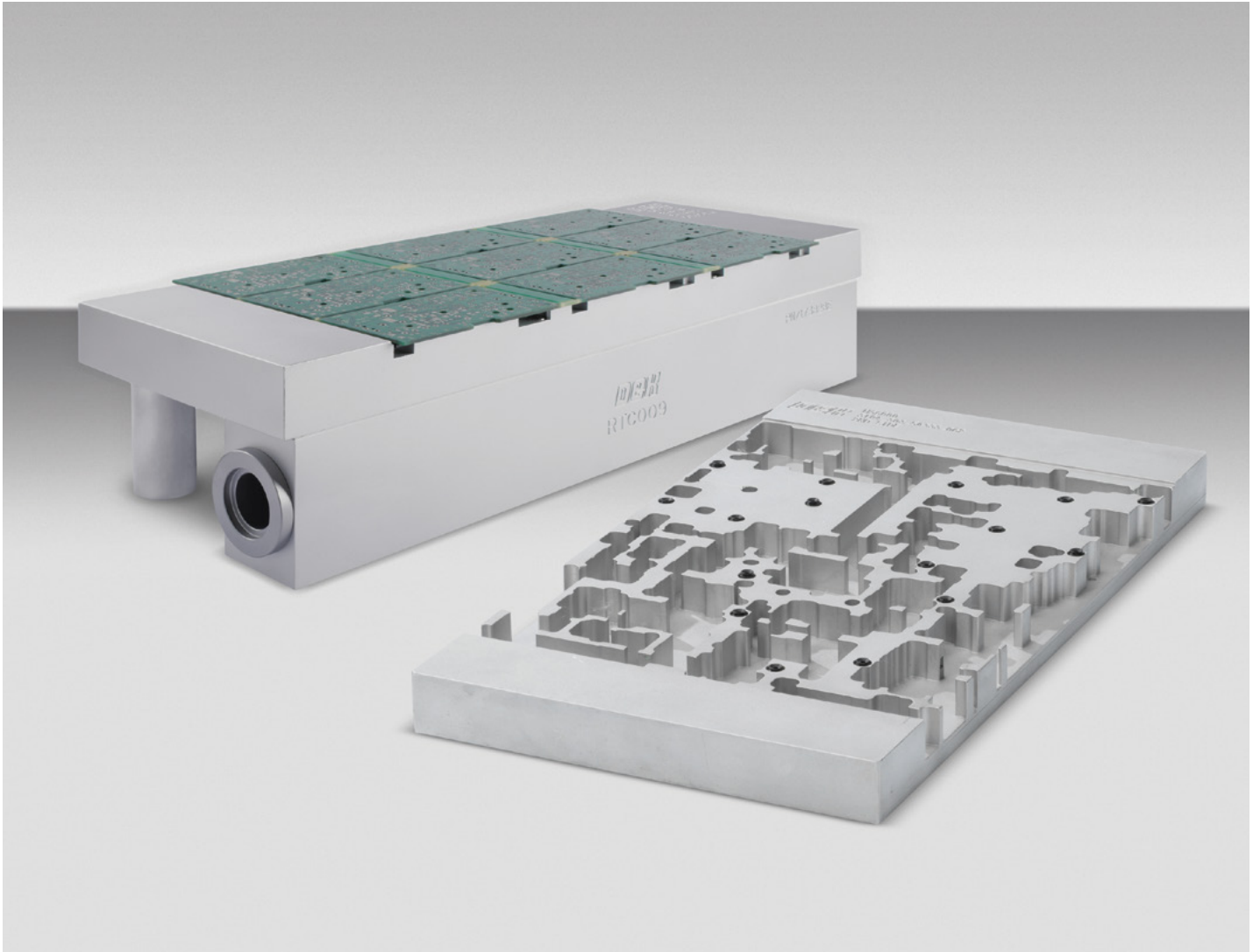# Custom dedicated tooling

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 x 270 x 50 mm
Surface flatness	<0.05 mm
Aluminium plate (maximum size)	Up to 550 x 450 x 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	**Description**
SAP	
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)
03154267-01	Support bar 400 x 25 x 81 mm
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
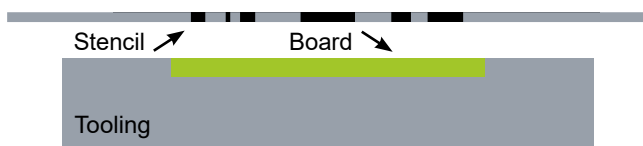
1st pass tooling support (flat plate)

2nd pass tooling support with routed component pockets

Single routed tooling plate to support side 1 and 2
*(1st and 2nd pass tooling plate)*
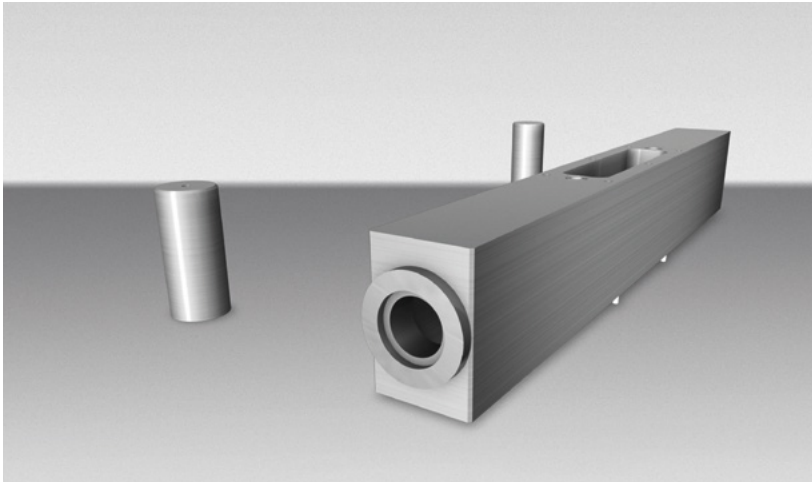
'Narrow Tower' for DEK printers

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.
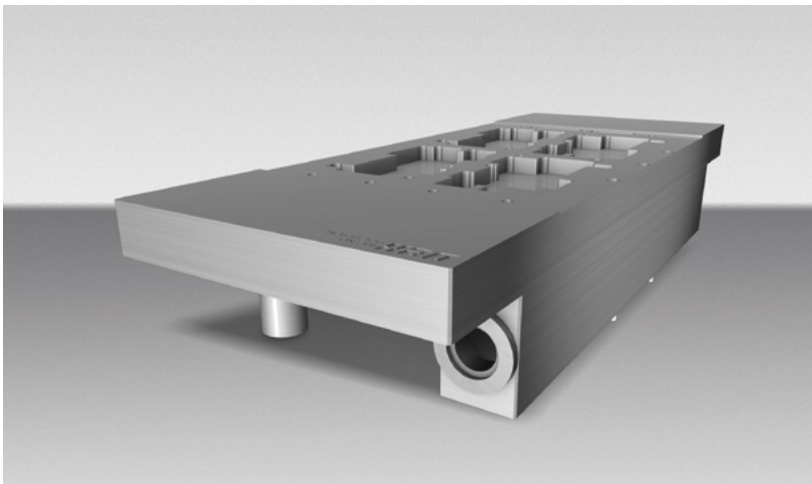
'Narrow Tower' with tooling plate

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.
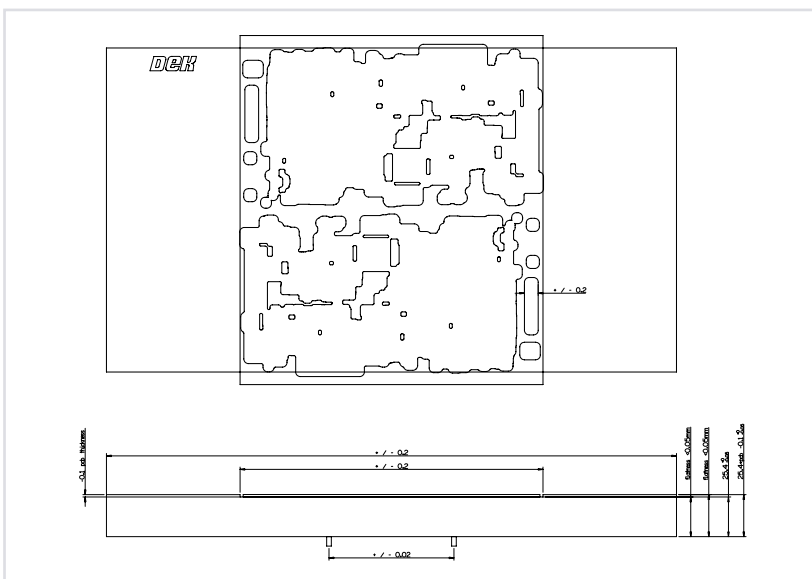
Tooling tolerances

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

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