SMT Stencils

THIN METAL PARTS

New Materials New Processes

Thin Metal Parts offers four performance stencil product lines, each with a unique feature set and designed to meet specific and differing printing needs throughout the industry. Using of a combination of new materials, new processing & coating, and the latest specialized equipment, TMP stencils are the next generation of SMT printing tools.

	Next-generation laser cutting technology	7-stage aperture polishing process	High-performance proprietary Alloy 9 material	Electroformed Nickel 11 material	TMP-LACH® ultra-performace surface coating
E-Form Plus®*	●	●		●	●
Alloy 9 Plus*	●	●	●		●
Alloy 9*	●	●	●		
17-7 Stainless	●				

* These stencils outperformed similar leading-competitor's products in independent testing

Nickel 11 electroformed sheet

TMP's exclusively developed and manufactured material is specially formulated to outperform other elelctro-formed nickel stencil materials. Nickel 11 offers:

- Increased solder paste volume
- Better print-to-print consistency
- Custom stencil thicknesses in 0.00025" increments
- Improved release characteristics

Alloy 9 material

This proprietary material offers a unique combination of properties which pair optimally with TMP's laser equipment. When compared to stencils made with other alloys and stainless steels, Alloy 9 offers:

- Smoother aperture walls
- Consistently cleaner solder bricks
- Reduced print defects

Next-generation Laser Cutting technology

A new level of precision reults in stencils with uniform apertures plus exceptional edge-to-edge performance.

- 25 micron wide laser beam
- +/- 2 micron Axial Precision
- +/- 2 micron repeatability
- Custom motion algorythm ensures aperture wall profile is consistent across corners and straight edges.

New Materials - New Processes

Applying the advanced technologies and equipment developed for the manufacture of high-precision parts, TMP stencils offer new levels of printing performance.

- Customized laser is the only of it's kind in the U.S.
- All coatings are developed and applied in-house
- ODB++ file format is our design standard
- Design, Laser, and wet processing all performed at TMP's Colorado manufacturing facility.

7-Stage aperture polishing process

An optimized combiniation of several cleaning and polishing stages significantly improves paste volume performance.

- Solder bricks are cleaner and more consistent from print-to-print.
- Does not sacrifice edge sharpness between stencil surface and aperture wall.

TMP-LACH® ultra-performance surface coating

An electrodeposited coating that significantly improves stencil performance characteristics and lifecycle.

- Superior **Lubricity**
- Enhanced **Abrasion Resistance**
- Highly **Corrosion Resistant**
- Improved **Hardness**