

NIL-SFT12 Series



Growing Innovation



Single tool platform supporting both UV- and thermal stamp fabrication.

A stamp fabrication tool for nanoimprint enables fast, precise production of high-resolution imprint stamps with excellent pattern fidelity. NIL-SFT12 Series delivers scalable manufacturing, tight CD control, and low cost per stamp. Optimized for reliable manufacturing, it ensures high yield and seamless integration into industrial imprint workflows.

Miniaturization pressure in semiconductors is a key driver for NIL stamp tooling. Nm-feature-patterning using UV-NIL-molds is increasingly required as photolithography reaches its physical and economic limits. With SUSS industry-leading stamp fabrication performance and flexibility of NIL-SFT12 Series you can achieve defect-free, high-fidelity results as well as reduce your cost of ownership.

Industry-leading chuck flatness ensures uniform contact and curing

Single platform supports **UV- and thermal stamp processes**

Modular, future-proof stand-alone platform

We are committed to driving the next chapter of innovation and growth in the advanced backend together.

NIL - SFT12 Series

Highlights

Industry-leading stamp fabrication performance

Stand alone machine with small footprint, motorized chuck approximation and LED-based exposure

Modular platform designed for flatness, scalability, and cost-efficient imprint manufacturing

Flexible Platform for UV- and Thermal-Stamp-Processes

High-Intensity UV-LED-Exposure (up to 200 mW/cm²)

High uniformity (down to $\pm 5\%$)



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Technical data

General	
Bottom Substrate / Master Sizes Thickness	Dia. 150 mm, 200 mm, 300 mm Semi and up to 12mm
Top Substrates / Stamps Thermal Option	PET Foil, Glass plate 9" x 9", 14" x 14"
Dimensions (WxDxH):	1054 x 1193 x 1550 mm3 (lamp house in idle position)
Weight	437 kg
Process Modes	The basic machine is for Stamp Fabrication by UV treatment through microstructures
Substrate Processing	Manual Substrate Loading. Stamp material dispensing. Motorized individual or synchronic Z-Axis height control. High precision measurement gauge feedback. Exposure
Options	Stamp fabrication by Thermal treatment requires corresponding Top Tool and Chiller.

Floor Exposure UV LED Unit	
Wavelength	365 nm
Light Uniformity	±5 %
Light Intensity	Up to 200 mW/cm2
Exposure Area	300 mm x 300 mm; up to Dia. 313 mm

Special Features	
Dispensing	Manual dispensing arm w/ cartridge holder for repeatable concentric dispense. Controlled dispensing by pneumatic dispensing mechanism.
Tooling storage	For 1x Top tool

Utilities	
Vacuum	< -75 kPa
Compressed Dry Air	0.8 MPa
Power Apparent Power	400 V~, 50/60 Hz 4600 VA



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