

SUSS IMPRINT LITHOGRAPHY EQUIPMENT

SUSS MA8 Gen5

ALIGNER FOR MICRO- TO NANO-IMPRINT PROCESSES

The MA8 Gen5 represents the latest generation of SUSS MicroTec's semi-automated mask aligner. The new platform introduces improved imprint processing features for standard, advanced and high-end processes.

The MA8 Gen5 offers an enhanced ergonomic and user-friendly design, cost efficiency and a reduced footprint, and is the perfect tool for use in research and mid- to large-scale production.

SUSS MicroTec's MA Gen5 is setting a new benchmark in full-field lithography for various market segments, especially for a large variety of imprint applications in the field of LED, MEMS/NEMS, micro-optics, augmented reality and optoelectronic sensors using the renowned SMILE technology. The high degree of automation of the MA8 Gen5 series enables outstanding process results. Sophisticated mechanical workings ensure high adjustment precision: the particular design of the top- and bottom-side microscope unit (TSA and BSA) eliminates long travel for the TSA microscope, as well as the disturbing vibrations. It supports several imprint processes for micro- and nano-structures.

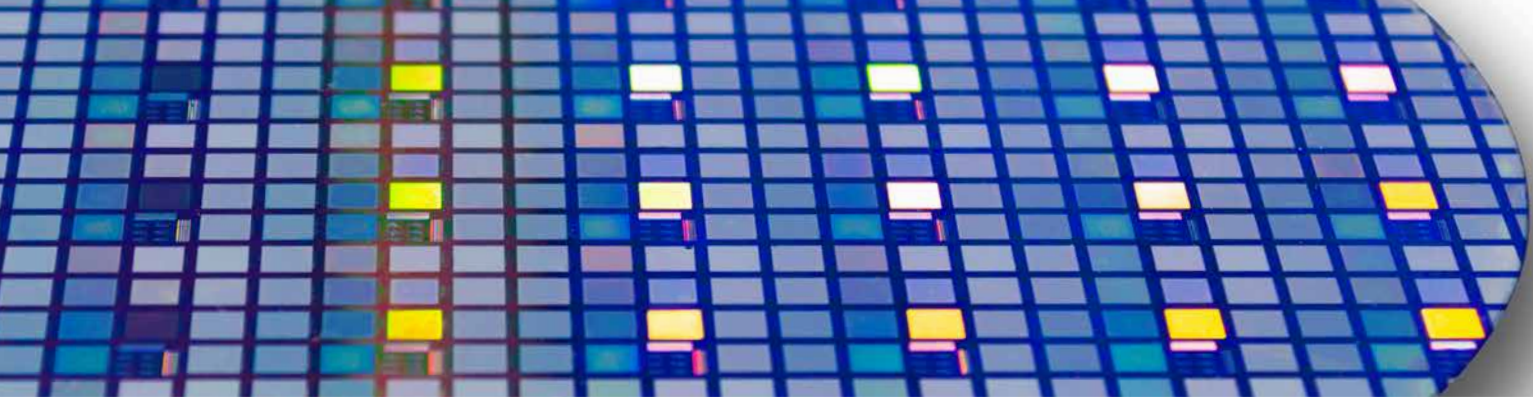
SUSS Leveling System

SUSS mask aligners are equipped with an enhanced leveling system providing additional functionality. By direct and instant gap measurement during the stacking process, the parallelism between substrate and substrate, mask or stamp is reached with micrometric precision. This enables significant improvements in resolution compared to mechanical gap measurement.

HIGHLIGHTS

- + Enhanced SUSS leveling system
- + One tool covering micro- to nano-imprinting
- + Outstanding process results
- + User-friendly
- + Low cost of ownership
- + Small footprint and enhanced ergonomics





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TECHNICAL DATA

SMILE

For the transfer of patterns in the micro- to nanometer range, SUSS MicroTec offers SMILE (SUSS MicroTec Imprint Lithography Equipment) technology.

The SMILE process allows very precise imprint of both micro- and nano-patterns, thereby offering a wide spectrum of potential applications and thus excellent process flexibility. For example, SMILE is used in the production of many booming applications such as augmented reality, automotive applications and much more.

Stamp Fabrication

For stamp fabrication SUSS MicroTec offers the UV-SFT8 tool, a table-top solution for manufacturing high-quality composite working stamps for imprinting, accompanied by a UV-LED unit. With this new procedure, it is possible to reduce the manufacturing time of the stamps to only a few minutes.

With its high UV-light uniformity of $\pm 2.5\%$, the system yields homogeneously cured stamps, and in turn high structure fidelity. The tool offers great flexibility due to its compatibility with a wide variety of UV curable stamp materials, which allows integration into various applications from R&D to HVM.

Cost-effectiveness

With its compact design, the MA8 Gen5 offers a wide variety of processes despite a reduced footprint, which is a major factor in the attractive cost of ownership, saving costly cleanroom space.

Data, design and specification depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Illustrations, photos and specifications in this brochure are not legally binding. SUSS MicroTec reserves the right to change machine specifications without prior notice.



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MASK AND WAFER / SUBSTRATE

Wafer Size	1" to 200mm
Max. Substrate Size	200mm x 200mm
Min. Pieces	5mm x 5mm
Wafer Thickness	max. 10mm
Stamp Size	7" x 7" 9" x 9" 10" x 10"
Tape Frame	8"

UV-CURING UNIT

Wavelength	365nm
Exposure Source	water-cooled LED light sources
Intensity	max ca. 230mW / cm ² (365nm)
Intensity Uniformity	< 10%

GRAPHICAL USER INTERFACE

Windows 10
Unlimited Storage of Recipe
Remote Access Available

UTILITIES

Vacuum	< -800hPa
CDA	6000hPa - 8000hPa
N ₂	3000hPa - 8000hPa

POWER REQUIREMENTS

Voltage	AC 230V
Frequency	50Hz - 60Hz
Power	400W (Idle without Chiller) 1200W (without Chiller) 1800W (with Chiller)

PHYSICAL DIMENSIONS

Standalone (W x D)	1155mm x 1070mm
Height	1600mm without beacon
Weight	ca. 500kg

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