

# SD12

## SEMI-AUTOMATED WET-PROCESSING SYSTEM



SD12 SOLUTIONS	
	<b>Process Technologies</b> <ul style="list-style-type: none"><li>+ Solvent developing</li><li>+ Lift-off</li><li>+ Temporary-bond adhesive cleaning</li></ul>
	<b>Substrates</b> <ul style="list-style-type: none"><li>+ Wafers up to 300 mm</li><li>+ Substrates up to 230mmx230mm</li><li>+ Tape frame mounted wafers up to 300mm</li></ul>
	<b>Optimized for SUSS develop and clean technologies</b> <ul style="list-style-type: none"><li>+ Fan spray</li><li>+ Puddle</li><li>+ High-pressure</li><li>+ Binary</li><li>+ Mega-sonic transducer</li></ul>

## COMPACT SOLUTION FOR SOLVENT DEVELOPMENT, LIFT-OFF AND CLEANING<sub>+</sub>

SUSS MicroTec's semi-automated wet-processing system SD12 offers superior cleaning and lift-off functions for solvent media applications. The single-wafer processing platform serves pieces, wafer sizes up to 300 mm, square substrates up to 230mmx230mm, and tape frames for wafers up to 300mm. Its ability to handle various media and processes gives the flexibility needed for switching between applications and makes the tool the first choice for research environments and small-scale productions.

### SUPERIOR FLEXIBILITY

The SD12 demonstrates its versatility by its ability to handle many different kinds of substrates using optimized chucks. Even fragile substrates (e.g., InP, GaAs) can be securely processed. Special tooling and an extensive range of easily adjustable process parameters make the SD12 suitable for many process applications involving solvent media. With the ability to program parameters, such as step time, spin speed, acceleration and deceleration, dispense arm position, and swivel movement, the system allows for an optimized process flow resulting in reproducible and stable process results. Equipped with SUSS MicroTec's sophisticated dispensing technologies, the SD12 efficiently supports development, lift-off, and cleaning.

### SOPHISTICATED DISPENSE TECHNOLOGIES

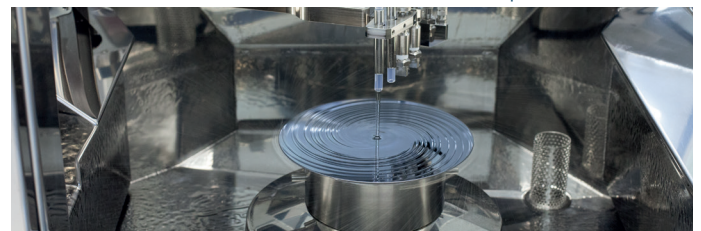
The SD12 offers a broad range of dispense technologies for different process needs. A wide range of processes can be run:

from a simple puddle or spray development to lift-off that requires, besides puddle dispense for soaking and final rinse, a high-pressure dispense to lift off the resist and the metal. Special applications such as cleaning of adhesives from wafers mounted on a tape frame that may require the support of a mega-sonic transducer for optimal cleaning results can also be performed. All of the above-mentioned dispense technologies can be configured at the dispense arm of the SD12.

### INTELLIGENT, SOLVENT-BASED MEDIA SYSTEM

The SD12 is customized for the special needs of handling solvent-based media. All parts coming into contact with process chemicals are made of unsusceptible materials. The drain can be connected to the house drain or to waste canisters.

Media are safely stored in a media storage equipped with exhaust connection and secured by a solvent leakage detector and a gas sensor. Flow control systems and pressure regulators manage the media. Optionally, the media temperature can be controlled to secure optimal process results. A recirculation system for the media can be installed to reduce overall media consumption.



# SEMI-AUTOMATED WET-PROCESSING SYSTEM

## TECHNICAL DATA

### BASE SYSTEM CONFIGURATION

Tool control	Via IPC (Windows 7) with touchscreen	
Chamber	Stainless steel	
Dispense arm	Position and swivel speed recipe programmable	
Number of dispense lines on arm	Max. 6 (dynamic dispense)	
Number of dispense nozzles on chamber wall	Max. 3 (static dispense)	
Drain	House drain connection	
Exhaust	Process chamber	(100 mm connection)
	Media cabinet	(100 mm connection)
	Electrical cabinet	(100 mm connection)

### OPERATING TOOL SOFTWARE

User interface	SUSS MMC software
Number of recipes	> 10.000
Number of process steps	Max. 40
Programmable process parameters	+ Step time + Spin speed + Acceleration / deceleration + Active dispense nozzle + Dispense arm position and swivel speed + Loop function

### SAFETY SYSTEM

Door	Safety glass with interlock sensor
Module	+ Leakage sensor + Gas sensor
Exhaust	+ Flow sensor + Differential pressure sensor

### REQUIREMENTS AND DIMENSIONS

Utilities	Nitrogen	4.5 bar (10 mm tubing)
	Compressed air	5.5 bar (10 mm tubing)
	Vacuum	-0.8 bar (10 mm tubing)
	Power	3x400V + N + PE
Dimensions	Width	1200 mm
	Depth	795 mm
	Height	1278 mm

### SUBSTRATES

Wafer size	2" up to 300 mm
Substrates	2" x 2" up to 230 mm x 230 mm
Tape frames	For wafers up to 300 mm
Pieces	Customized

### DISPENSE TECHNOLOGIES / NOZZLES

Puddle
Fan spray
Binary
Programmable high-pressure
Megasonic transducer
Back-side rinse

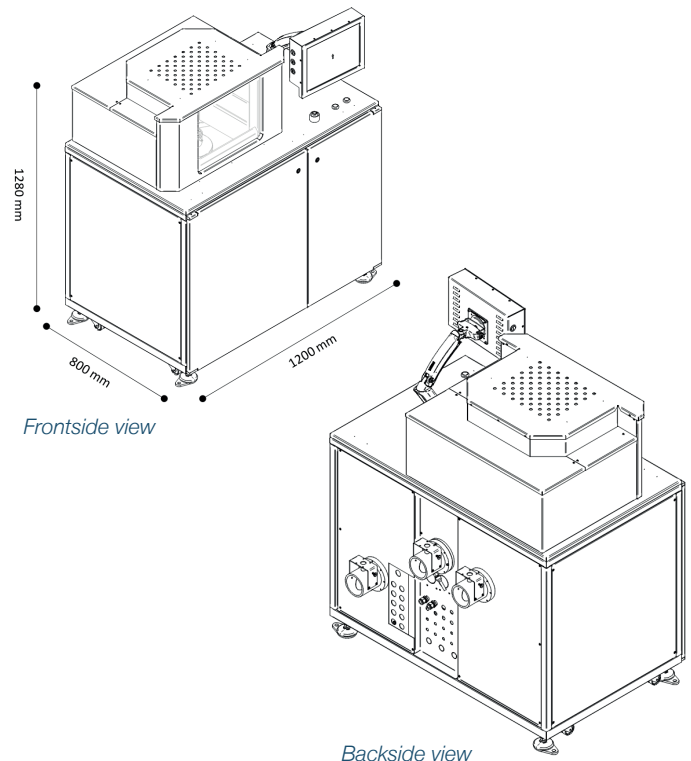
### ADDITIONAL TOOL OPTIONS

Multiple chucks
Temperature control for media
Switchable drain
Waste canister and tray
Media storage
Seismic protection

## EASY AND SAFE OPERATION

The SD12 is easy to operate and maintain. Process parameters and media data can be recalled at the push of a button. Programmable recipes accelerate workflow and facilitate repeatability. All parts are easily accessible for convenient operation and maintenance of the tool. Moreover, the tool was designed with a primary focus on operator safety. A sealed process chamber with an automatic safety glass door ensures an enclosed process environment and facilitates monitoring of the process. Interlock sensors guarantee the safe operation of the tool.

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*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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