# AD12
## SEMI-AUTOMATED WET-PROCESSING SYSTEM

**SÜSS+MicroTec**

| AD12 SOLUTIONS | |
|---|---|
| **Process Technologies** | + Aqueous development<br>+ Cleaning |
| **Substrates** | + Wafers up to 300 mm<br>+ Substrates up to 230 mm x 230 mm<br>+ Tape frame mounted wafers up to 300 mm |
| **Optimized for SUSS develop and clean technologies** | + Fan spray<br>+ Puddle<br>+ High-pressure<br>+ Binary<br>+ Megasonic transducer |

## FLEXIBLE SOLUTION FOR AQUEOUS DEVELOPMENT AND CLEANING+

SUSS MicroTec's semi-automated wet-processing system AD12 offers superior cleaning and developing functions for aqueous media applications. The single-wafer processing platform serves pieces, wafer sizes up to 300 mm, square substrates up to 230 mm x 230 mm, and tape frames for wafers up to 300 mm. 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 AD12 demonstrates its versatility by being able 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 AD12 suitable for many process applications involving aqueous 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 AD12 efficiently supports development and cleaning.

### SOPHISTICATED DISPENSE TECHNOLOGIES
The AD12 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. All of the above-mentioned dispense technologies can be configured at the dispense arm of the AD12.

### AQUEOUS MEDIA SYSTEM
The AD12 is customized for the special needs of handling aqueous 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 leakage detector. 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 | Polypropylene |
| 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 or waste canister |
| Exhaust | Process chamber<br>Media cabinet<br>Electrical cabinet |

### OPERATING TOOL SOFTWARE

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

### SAFETY SYSTEM

| | |
|---|---|
| Door | Safety glass with interlock sensor |
| Module | Leakage sensor |
| Exhaust | Differential pressure sensor |

### REQUIREMENTS AND DIMENSIONS

| | | |
|---|---|---|
| Utilities | Nitrogen<br>Compressed air<br>Vacuum<br>Power | |
| 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
- Chamber made of PVDF

## EASY AND SAFE OPERATION

The AD12 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.

### AD12



*Front-side view*



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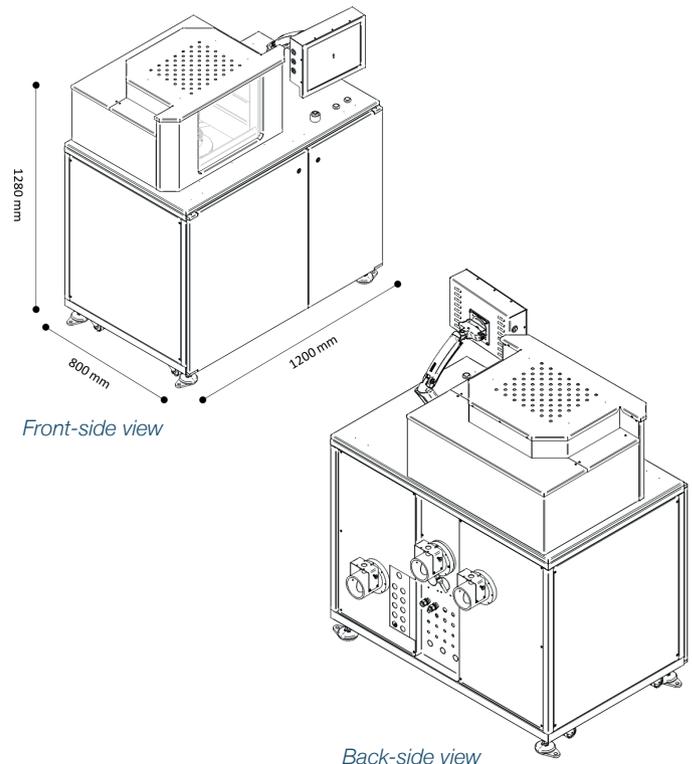
*Data, design and specification depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Illustrations, photos and specifications in this brochure are not legally binding. SUSS MicroTec reserves the right to change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

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