

PRECISE WAFER DEVELOPING

Reliable and residue-free removal of positive- or negative-resists in well adjusted development processes can be guaranteed with amcoss developer modules and technologies. At the same time the remaining wafer structures will not be affected, so that their original layer thickness stays intact. Even development of deep structures is possible. You choose from a great variety of comfortable options and processes and we will create development processes that have been perfectly designed to your needs. Smart features increase application flexibility, security, process precision and user convenience.

Developing processes

- // Puddle developing
- // Spray developing
- // Developing with TMAH
- // Developing with KOH
- // Developing with solvents
- // Megasonic-supported developing

Technical highlights



Special bowl rinse

The developer process bowl is being cleaned with a novel rinse system:

- avoids crystal- or particle build-up
- eliminates the risk of wafer contamination
- diminishes the reject rate noticeably



Smart chuck identification

With our automatic chuck identification, the system will always recognize which chuck is being used at the moment and will so exactly adjust maximum rotation speed and eventual acceleration:

- user security is rising considerably
- processing a wide range of substrates on a variety of chucks is possible



Bowl lowering and rising

Within the amcoss system the process bowl instead of the chuck is being lowered when depositing or withdrawing a wafer and raised during processing:

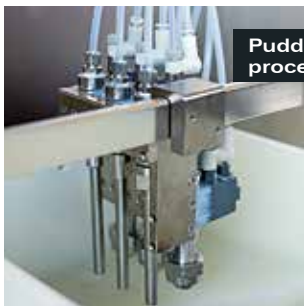
- chuck drive remains stable
- highly dynamic functions become possible
- within our semi-automatic amr equipment manual deposition of the substrate on the chuck is simple and more comfortable



DIW and media temperature control

Besides our standard hose-hose media temperature control system, DI water may also be temperature controlled. A fact that helps to:

- optimize process cycles
- improve process results



Puddle and spray developing in one process bowl

The developer arm is linearly driven which offers multiple benefits:

- puddle and spray development within one bowl are possible
- no need for a separate spray development station
- this saves machine space and process time
- increased application flexibility
- energy savings due to the absence of a pneumatic system



Megasonic-supported developing

Our optional megasonic-support has the advantage of faster media change on the substrate which helps to make development of deep structures, e.g. SU8, possible.

Additional important standard features for developing processes



- // All movement axles are linearly driven motor axles. In contrast to pneumatic axles they may be positioned with greater precision and programmed via our software. **(1)**
- // Up to 5 developer media within one bowl are possible. **(2)**
- // Programmable surface and backside rinse of wafers. **(3)**
- // Servo-controlled nozzle positioning which can be programmed with absolute distance values in the **ams PILOT** software. **(4)**



Selectable options

- // Mini environment: the whole equipment or just parts of it can be temperature controlled by comprehensive temperature and humidity control.
- // Our developing processes can be megasonic-supported for faster media change on the substrate.
- // Temperature control of DI water for optimized process results.

Developing processes in **amcoss amc** and **amr** equipment:

amc	amc	amc	amc	amc	amr	amr
500	1000	2000	2500	3000	200	300
•	•	•	•	•	•	•

ams PILOT process control software

With our own process control software **ams PILOT**, developing processes can be controlled meticulously. All developing recipes can be easily written and selected, all functions and features can be simply adjusted or set. Moreover, the user will be supported with manifold, special service functions for the whole developer module, including all nozzles, axles, pumps, etc., which makes service and maintenance very comfortable.



User-friendly, ergonomic, self-explanatory user interface: complying with Semi-Standard E95-1101.

Easy recipe writing and rewriting: without any software programming knowledge.

Integrated scheduling: helps optimizing process flow and throughput due to process and sequence control.

Log-function for informative reporting: generates extensive machine reports for all production lots and allows a number of settings.

Energy save mode: reduces the power and media consumption and thus also energy costs.

Comfortable service and maintenance functions: help finding and maintaining any defective parts and components easily.

Optional SECS/GEM interface: supports 200mm and 300mm standard SECS communication.

Process development: with recipe slot control the correct process parameters can easily be found.

Multi-client capability: the logged user will only see information relevant to him.