

COMPACT WET PROCESSING

Our extremely compact and fully automatic **amcoss amc500** spinner is optimized for flexible single wafer wet processes and thus, perfectly complements our **amc** series of single-wafer-process tools. With its substrate size range between 2" and 300 mm (9" square), **amc500** offers very flexible application possibilities in cleaning, lift-off and etching of wafers and masks. Our new, unique solutions for precise media temperature control and recycling, and therefore saving of etchants, support our customers by enabling precise processes and, at the same time, reducing costs as well as the impact on the environment.

amc 500 - minimum foot-print makes the most of your cleanroom space



Beneficial highlights

New chemicals-temperature control: eliminates the need for pre-dispense before etching. Inadvertent mixing of chemicals almost becomes impossible.

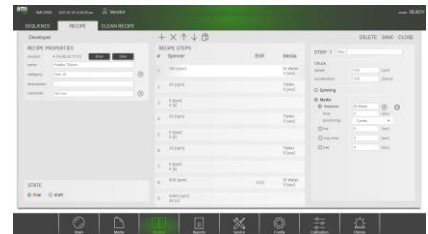
Proven amc key features: **amc500** stands out among all other **amc** models due to all proven technical features and its modern, user-friendly machine design. Through-the-wall installation is possible, as well as flexible machine adjustments and easy maintenance.

Safe: the equipment is designed in accordance with the newest safety regulations. A separate enclosure of the process area made of resistant material extends the safety features.

Space saving: **amc500** stands out due to its minimal outer dimensions of only 600 x 1215 mm. Even so, up to 3 vessels of chemicals can be stored, tempered and reused within the system-housing at the same time.

Full process control: each selected process is managed by the relevant module of our comfortable **amcoss amcPILOT** software complying with Semi-Standard E95-1101.

amc
500



Technical details

- // Wafer diameters: 2" up to 300 mm or up to 9" x 9"
- // Up to 2 I/O stations for 2" to 200 mm open cassettes or 300 mm FOUP
- // Max. 3 integrated individual chemical supply systems (more possible in external media unit)
- // 1 two-link robot handler with single end effector for low contact handling
- // Outer dimensions L x W: 1215 x 600 mm



Pick and place robot for wafer handling with slot scanner

Wet-process modules with multiple options

amc etching module

- // Etching of a multitude of round and square wafers and masks
- // Various etching processes as standard solutions available
- // Precise media tempering solution and control

amc cleaning module

- // Cleaning of wafer frontside, backside and edge bevel
- // Various cleaning methods as standard solutions available
- // Large area megasonic

amc lift-off module

- // High-pressure lift-off
- // Unique lift-off process with large-area megasonic
- // High- or medium-pressure cleaning with DIW or solvents
- // Special reclaim solution for minimal media consumption
- // Easy recycling of lifted metals
- // Programmable wafer backside, topside and bowl rinse

amc media unit

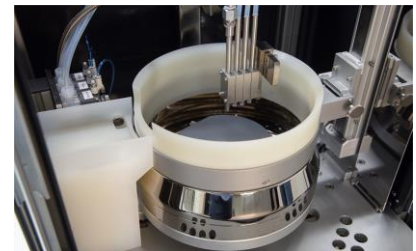
- // External unit for the storage of additional media vessels (supplementary to storage of 3 vessels inside the tool housing)
- // Reclaim, tempering and mixing is possible
- // Ready for bulk filling via fab supply

Optional configurations

- // Media reclaim
- // Concentration monitoring
- // Filter fan unit with antistatic discharge system
- // Optical endpoint detection



Cleaning module



Lift-off module for a large variety of lift-off techniques

amc 500 – new dimensions in chrome etching

One possible application of **amc 500** is etching of a chrome layer on a glass substrate which is a standard process step, e.g., in the fabrication of photomasks. During this process, the substrate is sprayed or rinsed with a suitable etching chemical. After only a brief contact with the chrome layer, the etchant – typically an expensive mixture containing valuable components like the rare earth metal Cerium – is being drained. Therefore, only a small fraction of the etchant is being used, while a major part of it is inefficiently going down the drain when it could have been used to etch another layer.

amcoss GmbH and FIMA-Chem GmbH have jointly developed a turnkey solution for chrome etching. While FIMA-Chem supplies the spiking chemicals, **amcoss** has engineered and integrated the appropriate hardware into the **amc 500**. This represents a perfect cooperation of two innovative companies supporting our sustainability concept, environment protection and reduction of costs.

Using a novel technique, we can recycle the etchant on the tool which can then directly be re-used to process another substrate. Highly concentrated additives are employed to replenish the used-up etchant thus preparing it for another run. So, the etching chemical is used at maximum efficiency, saving a significant amount of etchant costs.

Benefits

- // Significant decrease of processing costs
- // Vastly reduced impact on the environment due to reduced use of chemicals and less waste

