amcoss
facilitating innovation

efficiency.
Ultimate perfection in spin coating

amc
1000+

amc
2000+

amc
2500

amc
2000+

design.

Economic, custom-made and comfortable solutions_

amcoss spin coating equipment is the perfect answer to the manifold challenges that have to be faced in the microsystems and photolithography industry. Our **amc**-product-line does set new standards with regard to cost-benefit calculation in spin coating: our customers are able to optimize their production processes and so reach best process and product quality at highest cost savings and excellent return on investment.

Here our attractive cost calculation becomes evident. Sophisticated features contribute to a perceptible increase of output – which saves production time, lessens reject and considerably reduces quality related costs. Resist savings of up to 70% and avoidance of test-runs lead to extremely low material costs.

With their extraordinary design, perfected construction and self-explaining software, **amcoss** machines are configured for maximum user-friendliness and comfortable handling.

Due to the platform-concept and modular system of amcoss spin coaters our customers are able to effortlessly realize very different process applications: Different processing modules and carriers with various substrate types may be individually combined on the same platform.

With **amc** spin coaters by **amcoss** you will always be one step ahead!

COATING

modules.
THINKING AHEAD!

With our amc-series we are able to offer individual solutions for substrate coating. We do not have a standardized range of machines. In close cooperation with our customers, we will analyze their individual production and process related needs. Thereupon we will set up their unique amcoss machine with the modules chosen by them on one of our three basis platforms. Any future modifications or conversions can be easily realized at any time. You cannot ask for more flexibility – or performance at an equally attractive price!

amc 1000+

975 mm / 1100 mm
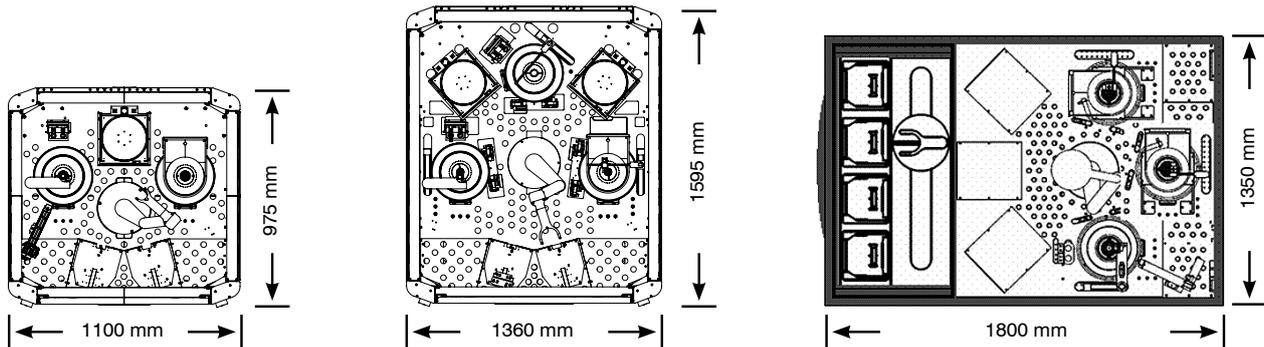
Wafer diameters: 2" to 8"
2 I/O stations
3 individual processing modules
1 three-link robot handler

amc 2000+

1595 mm / 1360 mm

Wafer diameters: 2" to 8"
4 I/O stations for 2" to 6" wafers or
2 I/O stations for 8" wafers
5 individual processing modules
1 three-link robot handler

amc 2500

1350 mm / 1800 mm

Wafer diameters: 2" to 8"
4 I/O stations (4 x open or 3 x FOUP)
6 individual processing modules
2 three-link robot handler

amc coating module

// Well thought-out bowl design for optimal process results (e.g. no cotton candy when processing high viscosity resists)

// Servo-controlled nozzle positioning, programmable with absolute distance values

// Programmable wafer backside and bowl rinse

// EBR (Edge Bead Removal) system programmable with absolute distance values, also for rectangular substrates

// Dispense system for up to 6 different media per bowl with automatic nozzle change

// Range of resist pumps to choose from

// Optional temperature and humidity control

amc developer module

// Spray-, puddle or mega-sonic development

// Various developer media per bowl possible

// Automatic nozzle change

// Servo-controlled nozzle positioning programmable with absolute distance values

// Programmable wafer backside and bowl rinse

amc temperature modules

// Up to 5 (optional 6) hot- or coolplates per module

// Standard hotplate (60° - 200°C)

// High-temperature hotplate (60° - 450°C)

// HMDS primer hotplate (60° - 200°C)

// Single or multi-zone hotplate

// Coolplate (10° - 60°C), with either water or peltier cooling

// HMDS vapour priming

// Curing by UV light or supported by UV light

// Options for proximity control
  - Fixed proximity
  - Programmable proximity
  - Vacuum contact

amc wafer-handling

// „Pick & place" robot

// Contactless wafer centring „on-the-move"

// Slot-scanning including identification of carrier type and wafer size

// OCR, bar and matrix code support

// Edge gripping for wafers

Optional configurations

// Thin wafer processing

// Backside coating

// Perforated wafer processing

// SMIF I/O station

// Mini environment with T/H control

keyfeatures

Small features, enormous value_

// **Wafer centring „on-the-move":** Just before reaching the bowl, scanners will determine the position of the wafer on the robot handler and will calculate its necessary movement for an exact centring position on the chuck. A separate positioning station and an extra handling step become unnecessary. This ensures high precision centring, reduces reject, saves time, money and space within the equipment.

// **Servo-controlled positioning:** Thanks to integrated servo-control any desired position of the dispense nozzle as well as the edge bead removal nozzle above the wafer can be targeted with absolute accurateness by just entering continuously variable absolute distance values in the recipe. No time consuming calibrations or test-runs are necessary.

// **Individual dispense path:** As all desired positions of the nozzle are programmable on the X, Y and Z axes, dispense of a variety of resists with different viscosities in a spiral- or meandering movement is possible. You will profit from extraordinary uniformity and resist savings of up to 70%.

// **Substrate variety:** A great variety of substrates within different carrier types can be handled in parallel during one single process without modification. Slot-scanning even includes the identification of the wafer size and thickness. Our amc equipment supports all possible substrate configurations whatever their thickness, shape or material.

// **Maintainance and security:** All machines' electrical components can easily be accessed through the back of the equipment. The media system is clearly separated and placed below the electronic system, which makes a breakdown caused by leakage impossible.

// **Standard components:** The use of high-quality standard components guarantees an attractive price-performance ratio, manageable costs for spare parts, highest reliability and enables simple multivendor-capability sourcing.

// **Comfortable transparency:** Large front windows and large frameless, transparent side doors with advantageous shading allow good and comfortable view into the working area for constant process observation.

// **Easy accessibility:** The transparent side doors are completely removable for easy access to the machine's interior for retrofitting or maintenance. Their lightweight, frameless design as well as the magnetic door latches and self-positioning upper holders guarantee greater working comfort for the operator.

The sophisticated product features of our amc coating equipment are designed to perfect output, precision and process quality and to reduce production costs at the same time. They support processing flexibility and user-friendliness. Our machines facilitate your objectives!

BENEFIT

software.

A software with an added value_

amc software is the core of our equipment. An intelligent software-solution contributes to permanent optimization of processes as well as to the flexibility of the whole equipment.

With our amc software we came up with a solution that offers a vast but very helpful array of options and features, which are of noticeable benefit. Even with substantial changes in processes no expert knowledge is necessary. A user-friendly and self-explaining user interface emphasizes easy handling and its manifold possibilities.
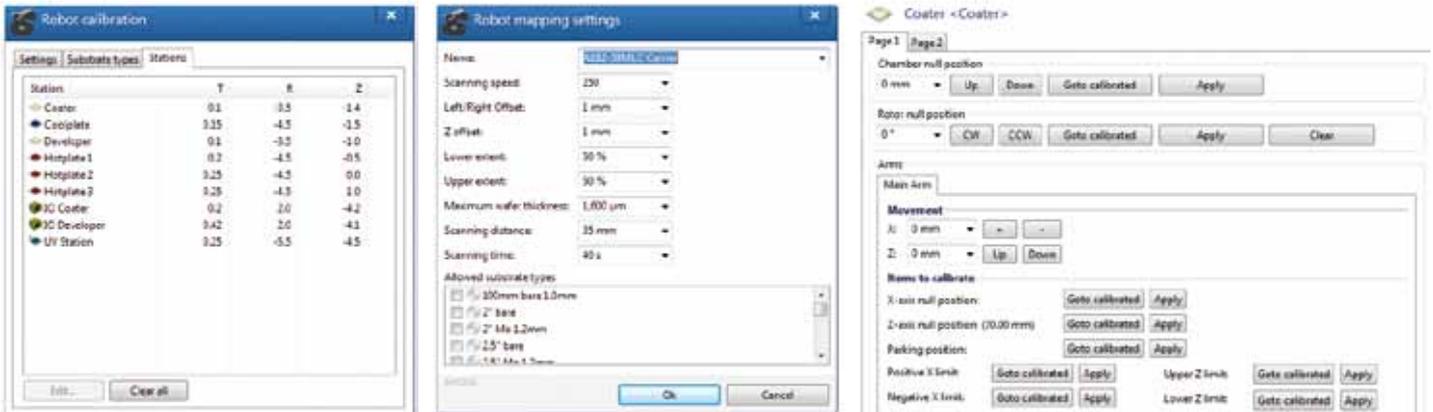
// **Open and easy to expand:** The expandable software architecture makes later modifications and retrofits possible. In the clearly laid out configuration menu all thinkable adjustments may be carried through in an easy and comfortable manner. Our amc software is an open platform: any modifications to the equipment will not require a new software.

// **Click & teach:** All relevant teaching possibilities are covered by the same software platform. You do not have to hire an IT expert in order to re-program the source code. No matter which teach-ins you want to carry out – with only a few simple clicks you are able to teach your amc equipment yourself!
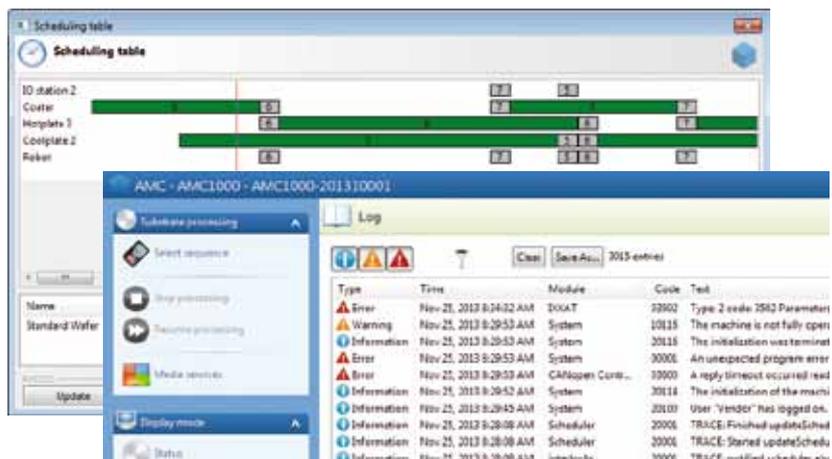
// **Recipe based substrate scanning:** The software determines the handling of different wafer types with the help of recipes or sequences. The machine will automatically recognize the carrier type on the I/O station and with it, the shape and size of the substrate. The recipe will then control the movements of the robot handler and all necessary processing steps. If the type of the substrate diverges from the specifications in the recipe, an error message will be displayed.

// **Easy recipe writing:** No software programming knowledge is necessary for writing or rewriting individual recipes. Furthermore it is possible to simply write recipes on your own PC and to afterwards transfer them to the coater via network.

// **Integrated scheduling:** The scheduling function very precisely controls the whole process cycle and the course of the individual sequences. The aim will always be an ideal process flow and a maximum possible throughput. In addition, manual sequence-optimization is possible; e.g. for desired delays. Unique and very clever is the amc scheduling table which visualizes all processing steps.

// **Log-function for informative reporting:** The integrated log file consistently generates extensive machine reports for all production lots instead of just producing simple error logs. It is possible to set lot identifications as well as individual storage modes.

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