



Leica EM SCD050

Super Cool Sputter Coater

Precious and Non-Precious Metal Sputtering and Carbon Evaporation

Living up to Life

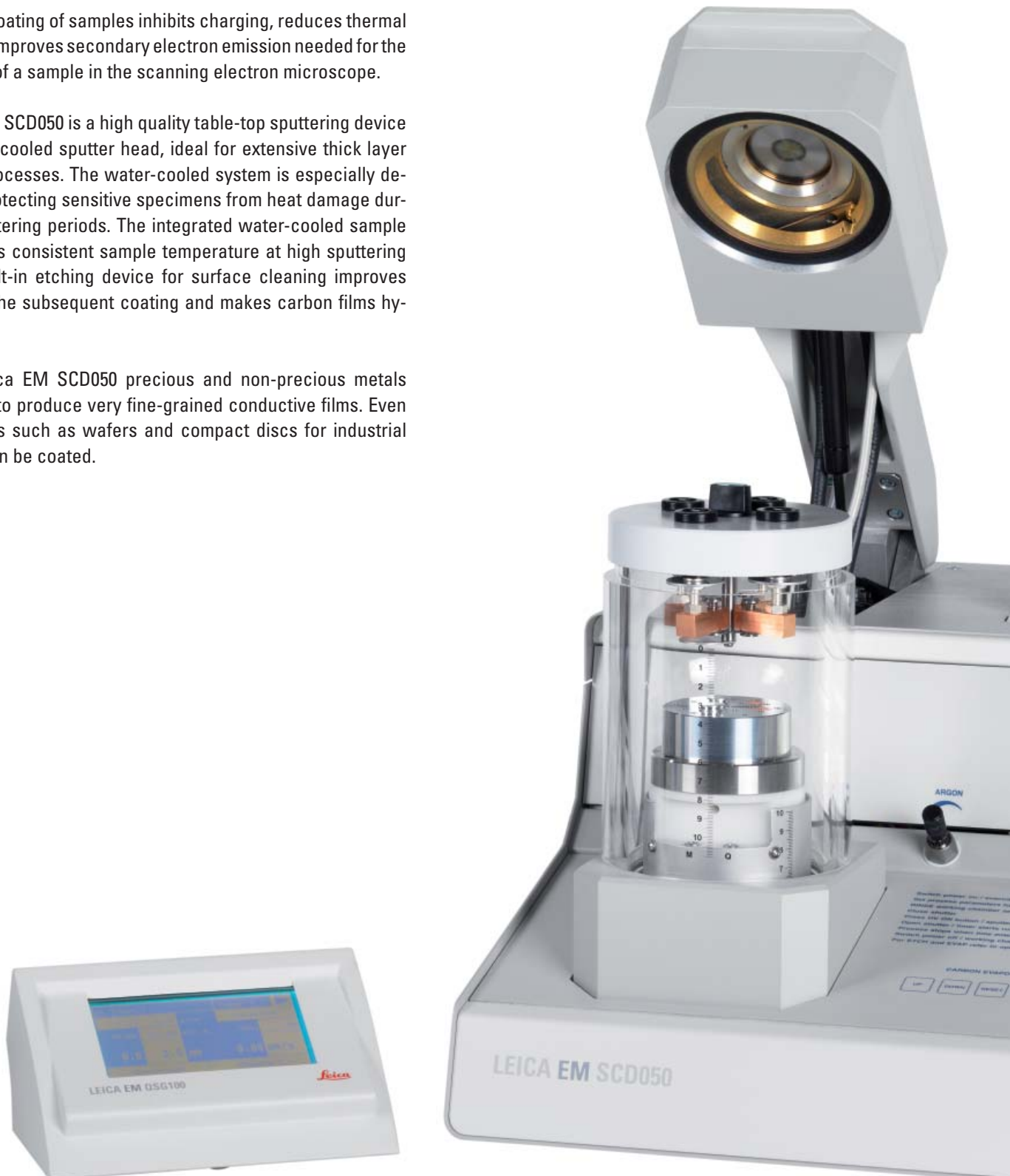
Leica
MICROSYSTEMS

Sputter Coating

The sputter coating of samples inhibits charging, reduces thermal damage and improves secondary electron emission needed for the examination of a sample in the scanning electron microscope.

The Leica EM SCD050 is a high quality table-top sputtering device with a water-cooled sputter head, ideal for extensive thick layer sputtering processes. The water-cooled system is especially designed for protecting sensitive specimens from heat damage during long sputtering periods. The integrated water-cooled sample stage ensures consistent sample temperature at high sputtering power. A built-in etching device for surface cleaning improves adhesion of the subsequent coating and makes carbon films hydrophilic.

With the Leica EM SCD050 precious and non-precious metals can be used to produce very fine-grained conductive films. Even large samples such as wafers and compact discs for industrial processes can be coated.



Single and Multiple Carbon Thread Evaporation

The Leica EM SCD050 can also accommodate carbon thread evaporation processes. This method is known as “flash evaporation” of a carbon thread. In a matter of seconds, the thread heats up, flashes off carbon and breaks. Carbon atoms condense on the sample, coating it evenly with a thin carbon film.

The Leica EM SCD050 offers single and multiple carbon thread evaporation for the production of conductive carbon films for X-ray microanalysis (EDX, WDX) and carbon reinforcement films on collodion or formvar coated specimen support grids.

EM QSG100 Quartz Crystal Film Thickness Monitor

The Leica EM QSG100 is a quartz crystal film thickness monitoring system which ensures highest reproducibility of sputtered or evaporated layers by precisely measuring film thickness and coating rates.



Key Features

A quick fastening system within the water-cooled hinged sputtering head allows fast and simple replacement of foil targets. Removable anode ring for optimal plasma distribution.



Integrated shutter for pre-sputtering protects specimens from contamination.

Integrated 3 digit programmable timer with process termination for reproducible coatings.

Stepless height adjustable water-cooled rotating specimen table for correct film deposition with minimum specimen damage.

Various vacuum chamber sizes are easily exchangeable to accommodate different sample preparation processes. Even large samples such as compact discs and wafers can be evenly sputter coated. Removable glass vacuum chamber for easy cleaning and visibility. No cross-contamination between applications.

Integrated planar magnetron system with electron deflection for uniform and reproducible metal coatings.

Instructions printed on the console for easy operation.

The two stage rotary vane vacuum pump (5m³/h or 10m³/h) with oil mist filter guarantees clean, fast processing cycles. A power supply upgrade is available for users needing high sputtering rates or coated material which require high sputtering energy.





Pre-select etching process.

Argon pressure and sputter current parameters can be adjusted during processing for better control of the coating rate.

Process selection panel for quick evaluation of the process. The sputter parameters are not lost when the unit is turned off.

Triple safety concept with vacuum switch, sputter arm detection and implosion interlock safety shield.

EM QSG100 quartz crystal film thickness measuring device for precise layer thickness and coating rates. The required film thickness can be pre-selected. The desired coating rate can be achieved by selecting the optimal sputtering parameters.

Argon purge control for clean vacuum conditions.

Fast and Reproducible Results

The Leica EM SCD050 is a semi-automatic water-cooled coating system equipped with a selection of accessories for quick preparation of various applications:

- Fine-grained sputter coatings for SEM using chromium, copper, gold, gold/palladium, iridium, nickel, silver and platinum
- Conductive coatings on large scale samples (wafers, compact discs, etc.)

- Multiple layer systems
- Conductive carbon films on specimens for X-ray microanalysis (EDX, WDX)
- Carbon reinforcement films on collodion or formvar coated specimen support grids
- Carbon support films can be made hydrophilic using the integrated etching process



Planetary Drive and Rotary Stage:
For uniform coatings of highly fissured specimen surfaces.



Etching process for surface cleaning: Improves adhesion of the subsequent coating and makes carbon films hydrophilic.

All modules are easily exchangeable



Special Vacuum Chamber:
Optimal for large samples such as wafers and compact discs.



The CEA050 Carbon Evaporation Accessory module is easy to mount either with a single or multiple carbon thread evaporation flange. The carbon thread is covered during the degassing process by a shutter which protects the specimen from damaging heat and impure carbon coating. A standard height adjustable table ensures specimens of varying sizes are set at the optimum distance from the carbon evaporation source. Excellent for preparing films for X-ray microanalysis or carbon reinforcement films for TEM specimen support grids.

Serving Your Coating Needs

Leica Microsystems manufactures an array of high quality sputtering systems.
Ask your local representative about Leica Microsystems' complete product portfolio.

Leica EM SCD005
Cool Sputter Coater



Leica EM SCD500
High Vacuum Sputter Coater



Leica EM MED020
Modular High Vacuum Coating System



“With the user, for the user”

Leica Microsystems

Leica Microsystems operates globally in four divisions, where we rank with the market leaders.

• Life Science Division

The Leica Microsystems Life Science Division supports the imaging needs of the scientific community with advanced innovation and technical expertise for the visualization, measurement, and analysis of microstructures. Our strong focus on understanding scientific applications puts Leica Microsystems' customers at the leading edge of science.

• Industry Division

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

• Biosystems Division

The Leica Microsystems Biosystems Division brings histopathology labs and researchers the highest-quality, most comprehensive product range. From patient to pathologist, the range includes the ideal product for each histology step and high-productivity workflow solutions for the entire lab. With complete histology systems featuring innovative automation and Novocastra™ reagents, Leica Microsystems creates better patient care through rapid turnaround, diagnostic confidence, and close customer collaboration.

• Surgical Division

The Leica Microsystems Surgical Division's focus is to partner with and support surgeons and their care of patients with the highest-quality, most innovative surgical microscope technology today and into the future.

The statement by Ernst Leitz in 1907, “with the user, for the user,” describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: **Living up to Life.**

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