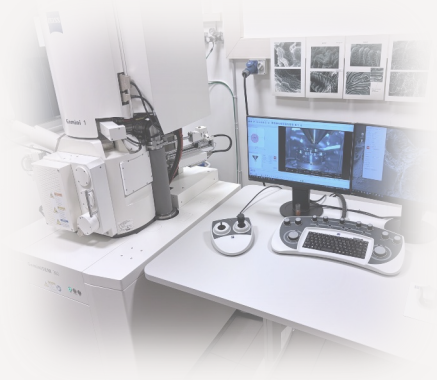
SEM – ZEISS GEMINISEM 360 SCANNING ELECTRON MICROSCOPE



Technical Specifications:

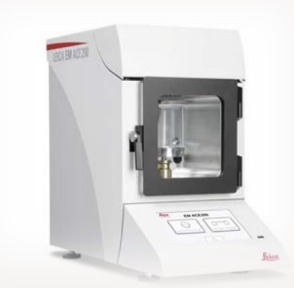
- Resolution: 0.7 nm with secondary electrons in high vacuum @15kV
- Acceleration voltage: from 20V to 30kV, beam current from 3pA to 20nA
- Magnification range: from 8x to 2.000.000x
- Detectors: secondary electrons, backscattered electrons, aSTEM
- NanoVP system for low vacuum operation up to 500 Pa
- Imaging software for post-processing

Satellite Instruments for SEM Sample Preparation

Leica EM CPD300 – Automatic Critical Point Dryer

The Leica EM CPD300 is an automated critical point dryer used for SEM sample preparation. This technique preserves the three-dimensional morphology of samples by avoiding the surface tension artefacts associated with traditional drying methods. The system uses carbon dioxide as a transitional fluid and gently removes solvents at their critical point. Automation ensures reproducibility and minimises error.

Leica EM ACE200 – Low Vacuum Coating Device



The Leica EM ACE200 is a vacuum system for coating samples with a thin layer of amorphous carbon via thermal evaporation. This process makes samples conductive for SEM imaging, prevents charging, and enhances image quality — particularly suitable for biological and non-conductive materials.

Agar Automatic Sputter Coater

The automatic sputter coater deposits a fine gold layer onto samples using high-vacuum sputtering. Argon plasma ablates gold atoms from a target, depositing them evenly on the sample. Metallisation is essential to render biological samples conductive, reduce charging, and preserve ultrastructural detail during SEM analysis.