Powerful electron optics, simple to operate.

The JEOL NeoScope
JCM-7000 Benchtop SEM

Look closer, see more

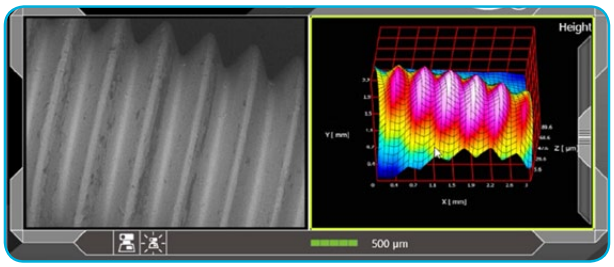
Increase your scope with the JCM-7000 benchtop SEM. The perfect complement to light microscopy, this compact instrument with a magnification range of 10X – 100,000X gives you the power of scanning electron microscopy in a convenient package.

Equipped with a large sample chamber, both high and low vacuum modes of operation, both secondary and backscatter electron detectors, real-time 3D imaging, easy to use metrology tools, and optional fully-integrated EDS, the JCM-7000 NeoScope is smart, flexible, and powerful.

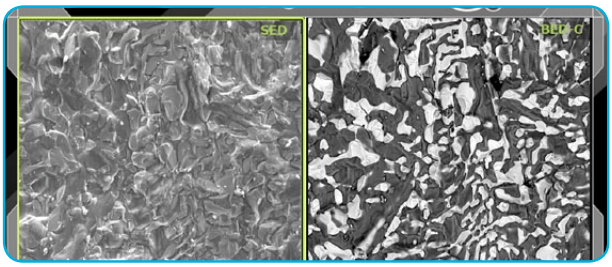
Easy to learn, easy to use

The JCM-7000's highly-advanced auto functions, stage automation, and intuitive software enable easy sample imaging and elemental analysis for users of all experience levels.

Innovations built into our benchtop platform make SEM accessible to everyone. Intuitive software puts the controls at your fingertips. Automatic condition setting is based on sample type and application for image formation in minutes. Seamless navigation from the holder graphic or optical image (option) to high resolution SEM image enhances productivity.



Our 6-channel, high sensitivity, solid state backscatter electron detector acquires composition, topographic and shadow (combination of composition and topography) images, and supports live 3D imaging.



Combining dual live image mode with signal mixing allows the operator to simultaneously observe and store images from two detectors. Sample shown: a mixed metal eutectic at 15kV.

McCRONE™
MICROSCOPES & ACCESSORIES

Take a closer look at the NeoScope 7000.

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Options offer more robust performance

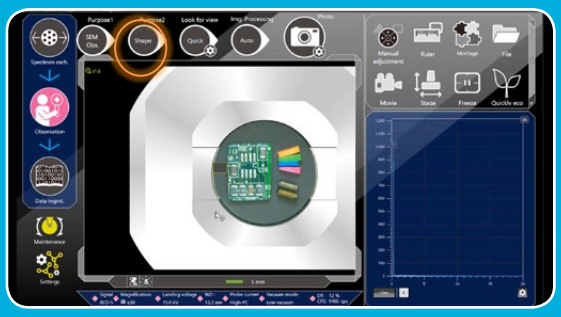
An energy dispersive X-ray detector option is available for elemental microanalysis. Addition of our color optical camera (stage navigation system) option provides seamless sample navigation from the optical to high resolution SEM image. This system supports real time 3D imaging, and combined with optional software, various surface texture data can be calculated such as: cross sectional profile, height, surface area, surface roughness and more.

NeoScope Plus Benchtop SEM Specifications

Magnification	• 10X – 100,000X (print 128 mm x 96 mm) • 24X – 202,168X (display 280mm x 210mm)
Signals	• Secondary electron image (Everhart-Thornley detector) • Backscattered electron image (composition, topographic, solid, 3D, high sensitivity 6-channel semiconductor detector)
Observation Modes	• High-vacuum and low-vacuum modes
Electron Gun	• Tungsten filament; Wehnelt integrated
Landing Voltage	• Selected from software interface: 15 kV, 10 kV, 5 kV
Specimen Stage	• Motor control: X=40mm, Y=40mm • Tilt/rotation stage available Tilt: -15° to +45°; Rotation: 360°
Max Specimen Size	• 80mm diameter, 50mm thickness (without specimen holder)
Signal Detection	• Secondary electrons, backscattered electrons
File Format	• TIFF, BMP, JPEG, PNG; AVI for live image display
Operating System	• Windows®10; Intel®Core™ i5 CPU (or equal)
Automatic Functions	• Alignment, focus, contrast, brightness, stigmator, filament adjustment
Configurations	• Main unit, desktop computer, rotary pump (optional oil-free diaphragm pump)
Dimensions (Main Unit)	• (W) 324mm x (D) 586mm x (H) 566mm (W) 12.8" x (D) 23.1" x (H) 22.3"
Weight	• 67 kg (main unit); 9 kg (rotary pump); 13 kg (power supply box)
Power	• Single-phase AC 100 V (compatible with 120 V, 220 V, 240 V) Fluctuation ±10% or less, with grounding

EDS Specifications

General	• Fully embedded Silicon Drift Detector • Live EDS analysis
Spectral Analysis	• Qualitative/standardless quantitative analysis (ZAF)
Live Analysis	• Live spectrum; live mapping • Plus — set analysis points, areas, map positions, and line scans
Size of Detector	• 30mm^2



Zeromag and Live 3D Imaging.

Embedded EDS option with live analysis.

Automatic condition setting based on sample type.

Easy filament exchange; no cleaning or centering needed. Automatic axis alignment.