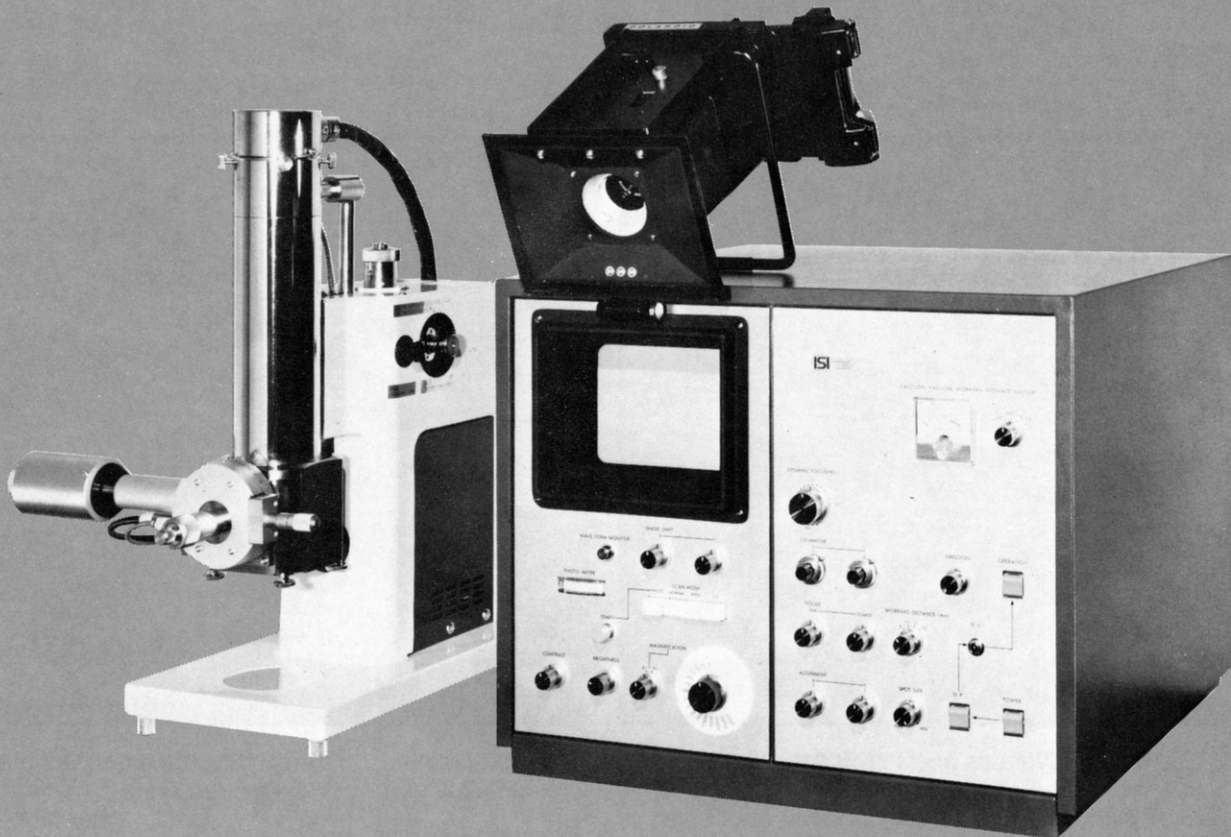


MODEL 7 SEM



The MODEL 7 SEM

A technical breakthrough in the art of scanning electron microscopes. Featuring 100 Angstroms resolution and a host of state-of-the-art features.



International Scientific Instruments, Inc.

SPECIFICATIONS

Resolution: Guaranteed resolution of 100 Angstroms.

Magnification: 30X to 120,000X range. SEM includes a working distance factor meter to determine the true magnification regardless of specimen height or working distance.

Accelerating Voltage: 15 KV, 2 KV optionally available.

Electron Gun: Unique design (U.S. Pat. No. 3,851,055) allows rapid and simple exchange of pre-centered filaments. Adjustment of filament to grid cap is eliminated. System includes 5 complete cathode assemblies.

Electron Optical System: System includes a pre-aligned electro-magnetic 3 lens system. The first condenser lens varies spot size and electron beam current density. Column liner tube allows cleaning without column disassembly. System includes coarse and fine objective lens control for focusing. System includes dynamic focusing for edge-to-edge micrograph sharpness.

Emission/Vacuum/Working Distance Meter: Switch selectable meter reads gun emission current, vacuum level and working distance factor.

Viewing and Record Scope: 8" CRT for viewing and photography. Built-in photometer for precise setting of contrast and brightness levels for perfect micrograph exposure.

Scanning: System is double deflection type with the following scan modes available: (1) Rapid scan—reduced area raster, approximately 5 frames/second for focusing and stigmator compensation. (2) Normal scan—full area, 1 frame/5 seconds. (3) Photo scan—full area, 1 frame/40 seconds. (4)

Built-in television scan on the viewing CRT and viewable over the complete magnification range of the instrument.

Stages: Instrument is provided standard with the TXYR stage: • Tilt -30° to $+60^{\circ}$ • X-Y ± 7.5 mm • Rotation 360° • Standard specimen size 15 mm dia x 15 mm thick. Interchangeable specimen cup allows 32 mm dia. x 15 mm thick specimen to be examined in total. The large universal stage is optionally available with the following specifications to handle extra large specimens: • X motion ± 20 mm • Y motion ± 20 mm • Tilt -10° to $+70^{\circ}$ • Rotation 0° to 360° continuous • Z (vertical motion) externally adjustable 8 mm to 38 mm • X-Y rotation readout digitally displayed • Electrical feed-thru 25 pins standard • BNC connector for specimen current analysis • Full specimen coverage of a 3" dia. by 1" thick specimen from the one mounted position totally through use of the external controls is provided. Specimen chamber is $5\frac{1}{4}$ "W x 5"H x $5\frac{1}{2}$ "D to allow specimens larger than 3" to be inserted. Chamber is provided with 2 unused blank ports in addition to the secondary detector for special applications.

Electronic Image Shift Control X-Y: 10 microns displacement at magnifications from 30X to 120,000X.

Vacuum System: Pumpdown time less than 1 minute. Manual vacuum system with vent valve interlock.

Safety Features: System includes a vacuum protection circuit for leaks and/or misoperation. A temperature sensing device is provided for protection against water failures and/or misoperation.

Power Requirements: System operates on available 110AC, 60 cycle, 1.0 KVA single phase.

Water requirements: 1/2 gallon/minute.

Specifications subject to change.



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