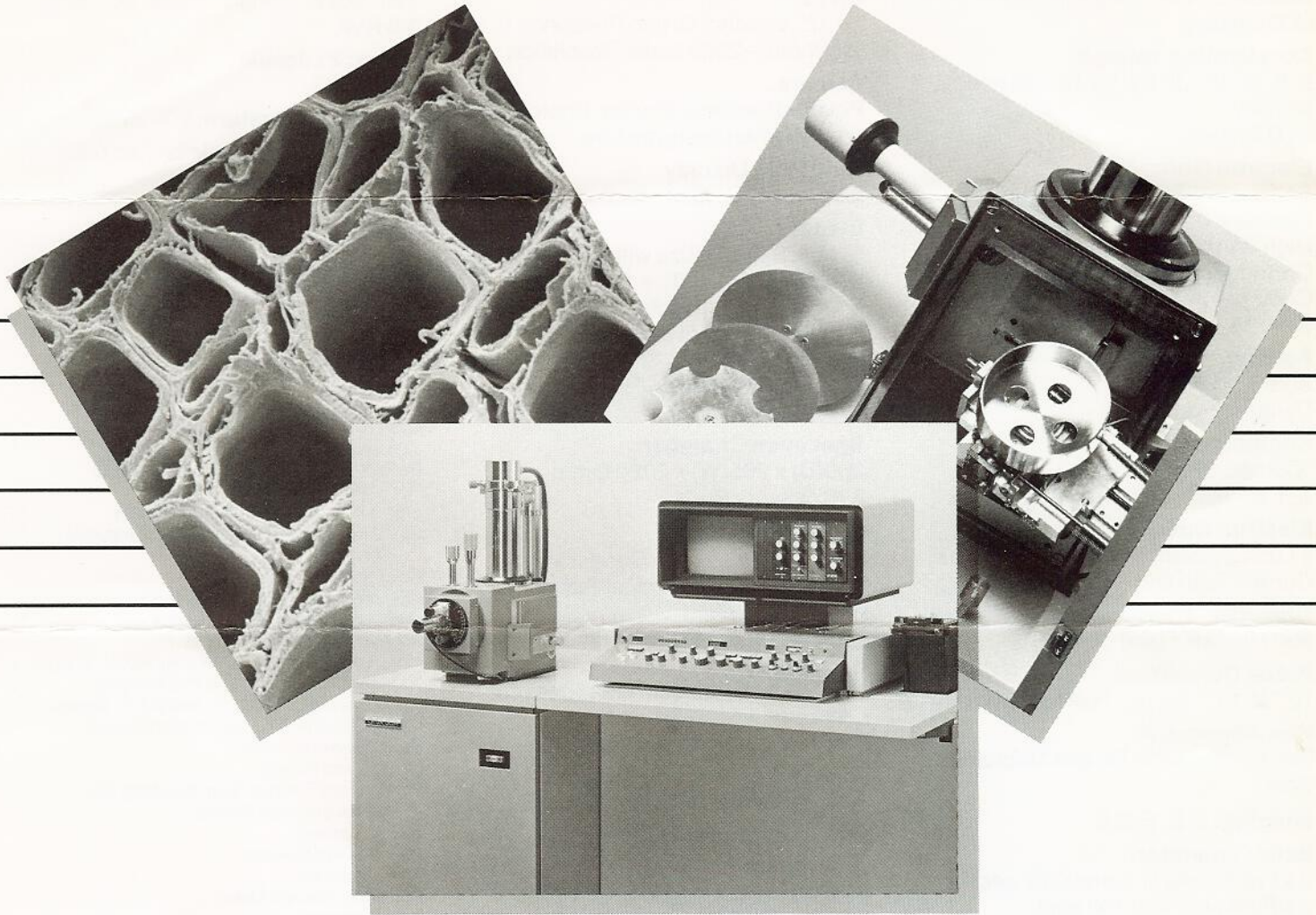


**ISI** International Scientific Instruments  
The SEM Innovators will improve your image

**New!**

# SX-40 Scanning Electron Microscope



## Automation with Outstanding Performance and Versatility

The SX-40 is the latest version of the well proven SX Series instruments from ISI. Automated features have been incorporated into the design which provide the ultimate in ease of operation. Specimen handling

capability and stage performance now offer full coverage of a 6 inch diameter specimen with motor driven X-Y controls. A wide range of accessories are available to expand its capability at anytime.

### Outstanding Features

- High Resolution—60 Angstroms
- Wide Accelerating Voltage Range—2, 5, 10, 20, 30kV
- Full Coverage of 6" Diameter Specimen
- Motor Driven Stage: X-Y Motions
- Auto-Focus
- Auto-Contrast Brightness
- Auto-Filament Saturation
- Auto-Vacuum
- Auto-Micrograph Identification
- "Compu-Stig" Monitor

# Specifications

**Resolution:** 60 Angstroms

**Magnification:**

10X to 200,000X (24 steps)  
Zoom (1X to 3X)

**Digital Magnification:**

Standard-Fully Compensated—  
LED Display

**Accelerating Voltage:**

2, 5, 10, 20, 30 kV, 1 x 10<sup>-5</sup>/10 min  
stability  
LED Display

**Electron Gun:**

Self Biased Triode with Tungsten  
Filament  
High Brightness and Long Life  
Cartridges  
Continuously Variable Electronic Bias  
(0-4 kV)

**Focus:**

Auto-Focus  
Dynamic Focus

**Stigmator:**

"Compu-Stig" Monitor  
X-Y, 8 Pole Electromagnetic

**Electron Optics:**

3 Lens System, 5 x 10<sup>-6</sup>/10 min Lens  
Current Stability

**Objective Aperture:**

200 Microns Fixed

**Probe Current:**

10<sup>-7</sup> to 10<sup>-12</sup> Amps, 1%/Hour Stability

**Gun Alignment:**

Electro Magnetic Tilt and Mechanical  
Shift

**Imaging:** S.E./B.S.E.

**Scan Generator:**

2 x Full Frame (1.6 and 0.07 sec)  
2 x Photo (80 and 160 sec)  
Reduced Rapid—Moveable  
Wave Form Display  
Spot, Line, X-Ray

**Brightness/Contrast:**

Automatic  
Accu-Range

**Image Shift:**

± 20 Microns at 8 mm W.D.

**CRT's:**

1 x 12" Viewing, Green Phosphor  
1 x Photo—2000 Lines Resolution

**Camera:**

Polaroid® without Shutter. Photo CRT  
on only when taking picture.

**Auto Data Display:**

Film No., K.V., Mag., Micron Bar No.

**Stage:**

6" Max Sample Size with full Coverage  
Eucentric Tilt - 10° + 90°  
X Motion 80 mm Motor Driven  
Y Motion 37.5 mm Motor Driven  
Rotation 360°  
Working Distance 8-65 mm  
BNC Connector

**Specimen Chamber:**

200(D) x 205(W) x 208(H) mm  
3 Accessory Ports

**Vacuum System:**

Fully Automatic High Conductance  
160 Liter/Min Mechanical Pump  
Reservoir Tank  
400 Liter/Sec Diffusion Pump,  
H<sub>2</sub>O Baffle  
10<sup>-6</sup> Torr Vacuum Gun and Specimen  
Chamber  
Dry Nitrogen Backfill Connection  
Vacuum Meter

**Anti-Vibration System:** Air Bags

**Dimensions and Weight:**

**Column Unit:**  
600(W) 880(D) 1240(H)  
Weight: 470 lbs.

**Console Unit:**

1060(W) 860(D) 1230(H)  
(Without Table Top 760(D))  
Weight: 563 lbs.

**Mechanical Pump:**

440 mm x 260 mm  
Weight: 60 lbs.

**Facility Requirements:**

**Power:**

100-120V—Single Phase, 60 Cycle,  
1.5 KVA

**Water:** 2 Liters/Min

5°C-20°C

**Room Temperature:** 20-25°C

**Relative Humidity:** less than 60%

**Stray Magnetic Fields:**

AC—less than 3 Milligauss  
DC—less than 10 Milligauss

**Floor Vibration:**

Less than 10 Microns at 1.5 Hz  
Less than 0.3 Microns at 45 Hz

**SX-40 Accessories**

Dual Magnification/Dual Signal Imaging  
Gamma Control  
Scan Rotation and Tilt Correction  
Y-Modulation  
Retractable ISI-Robinson BSE Detector  
Robinson Detector Power Supply  
Signal Processing, P.N. Imaging Unit  
Specimen Current/Electron Beam Induced  
Current System  
Solid State BSE Detector  
Electron Channeling Pattern System  
Cathodoluminescence Detector  
Accessory Mode Select Unit  
Independent Robinson Detector Power Supply  
with D.C. Subtract and P.N. Imaging  
Signal Mixing Box for S.E. and B.S.E. Signals  
Charge Free Anti-Contamination System  
Beam Blanking System  
50 Pin Feed through  
Ion Pumped Electron Gun, Including Gun  
Airlock and LaB<sub>6</sub> Emitter  
35 mm Camera  
6 x 9 Roll film Camera  
Spare Parts Kit  
Specimen Current Meter  
EDX Systems  
Sputter Coaters/Carbon Coating Attachments  
Critical Point Drying Apparatus  
CCTV Scanning System with 12" Monitor  
Water Recirculator  
Alpha-Numeric Character Generator, 16 Lines—  
32 Characters/Line  
Interface Adapter for Digital Scan Control

**ISI (Europe)**

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