



SM-720

Dual-Stage Scanning Electron Microscope



Ultra High Resolution Digital Field

Features:

- Ultra High Resolution-0.9nm.
- Schottky Field Emission Gun.
- Unique Dual Stage System for unlimited flexibility
- Frame averaging for bright, clear images.
- Up to 2048×2048 pixel resolution digital images.
- Extensive Auto functions.
- Easy to use Menu control.
- Internal Computer Control for all SEM and Image Processing Features.
- External Computer Control available for expanded capabilities. (image store, etc.)



■ Schottky Field Emission

ZrO/W Schottky FE gun.
Tip flashing is not required.
Higher stability improves results of analytical and measurement applications.
Lower vacuum requirements than cold FE.
Less susceptible to contamination.

■ Unique Dual Stage System

★ Top Stage

The Top Stage consists of a Highly Excited Objective Lens with a side entry goniometer stage and was designed specifically for high resolution microscopy above 200k× magnification.

An anti-contamination device is provided to reduce debris.

Several ports are provided for the addition of EDS detectors, STEM, BSE detectors and more.

★ Second Stage

The Second Stage consists of a Conical Objective Lens for high tilt applications at short working distances.

The large specimen chamber allows observation of 6" diameter samples.

A specially designed EDS port provides a 31° take off angle and several other ports are available for additional accessories.

■ Superior Image Viewing Capability

By adopting state of the art digital image processing techniques the SM-720 displays a clear, crisp image in expediently.

There is no difficulty in viewing the image in normal room lighting.

Frame averaging dramatically improves image quality under virtually any application.

■ Simple Operation and Extensive Automatic Functions

Computerizing all of the SEM functions simplifies operation of the system and was accomplished by adapting a simple operation panel and on screen menus.

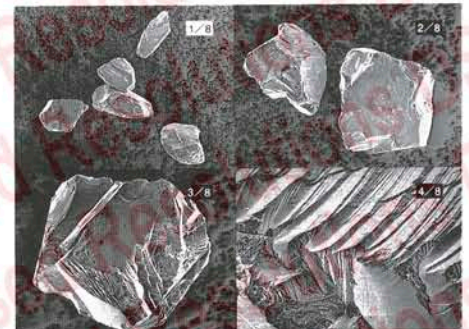
The performance of automatic functions was also enhanced by using digital technology and imaging techniques.

■ Frame Memory

2 pages of frame memory are provided for temporary storage of images. The images can be stored for reference or sent to the photo CRT for recording.

An optional memory board provides the capability to store eight(8) 1024×1024 images or two(2) 2048×2048 images.

Multiple images can be recalled and displayed simultaneously and photographed at their original pixel resolution.

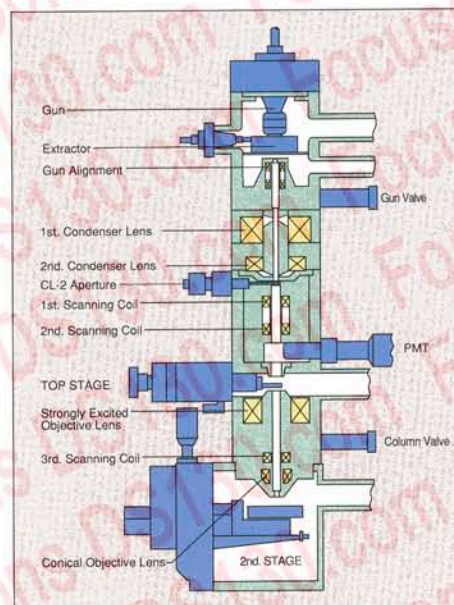


■ Operation Memory

Current operating parameters and conditions can be stored for later retrieval.

Up to 27 operating parameters can be stored in a file including accelerating voltage and specific photo conditions just to name a few.

Retrieving stored operating conditions for specific applications and default operating conditions for general use ensures reliable results, maximum performance and easy operation.



Emission SEM

SM-720



SPECIFICATIONS

SM-720		
	TOP STAGE	SECOND STAGE
RESOLUTION	0.9nm(30kV), 4nm(1kV)	1.5(30kV), 10nm(1kV)
MAGNIFICATION	10×-800,000×	20×-6,000,000×
ELECTRON GUN	ZrO/W SCHOTTKY FIELD EMISSION GUN	
ACC. VOLTAGE	0.5kV-30kV	
SPECIMEN SIZE	Max.10mm φ × 5mmt	127mm φ (150mm φ acceptable)
SPECIMEN MOVE	X: 6mm, Y : 6mm	X: 80mm, Y: 60mm, Z: 3mm-60mm continuous

AUTO FUNCTIONS

AUTO FOCUS
 AUTO STIG
 AUTO CONTRAST/BRIGHTNESS

SIGNAL PROCESSING

SCAN ROTATION
 TILT CORRECTION
 DYNAMIC FOCUS
 GAMMA CONTROL
 SIGNAL POLALITY

OPERATION MEMORY

ACC. VOLTAGE
 SPOT SIZE
 LENS ALIGNMENT
 ASTIGMATIZM CORRECTION
 FOCUS
 CONTRAST/BRIGHTNESS
 PHOTO SPEED etc.

INSTALLATION REQUIRMENTS

POWER: SINGLE PHASE 200, 210, 240V(50Hz/60Hz), 5.5kVA

GROUND: TYPE3 (100Ω)

WATER: FLOW RATE more than 4liter/minute

PRESSURE 1-5Kg/cm²

TEMPAERATURE 15°C-25°C

ROOM TEMPAERTURE: 20°C ± 15°C

HUMIDITY: less than 60%

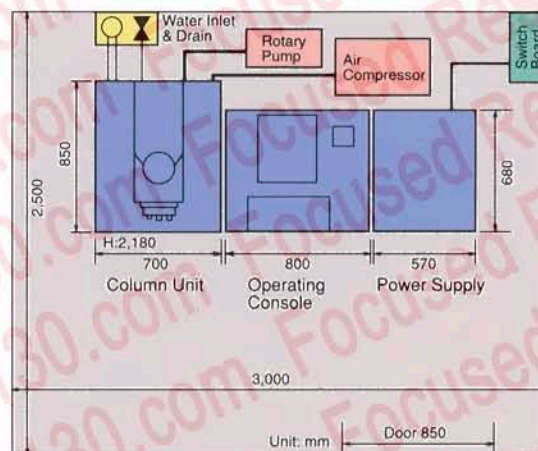
E-M field AC: less than 0.1 μT(1mG)

FLOOR VIBRATION: less than 0.05Gal

(less than 1 μmp-p for lower freq than 5Hz)

DIMENSIONS AND WEIGHTS

COLUM UNIT	W27.56" (700mm),	D33.46"(850mm),	H85.83"(2180mm),	1100.00lb(500kg)
OPERATING CONSOLE	W31.50" (800mm),	D26.77"(680mm),	H38.58" (980mm),	396.00lb(180kg)
MONITOR	W12.60" (320mm),	D15.75"(400mm),	H13.39" (340mm),	44.00lb (20kg)
POWER SUPPLY	W22.44" (570mm),	D26.77"(680mm),	H59.84"(1520mm),	396.00lb(180kg)
ROTARY PUMP	W18.90" (480mm),	D 8.27"(210mm),	H11.02" (280mm),	59.40lb (27kg)
AIR COMPRESSOR	W20.87" (530mm),	D11.81"(300mm),	H24.41" (620mm),	68.20lb (31kg)



● Specifications subject to change without notice



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