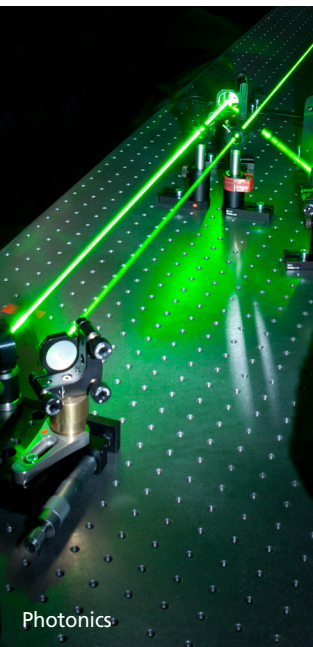
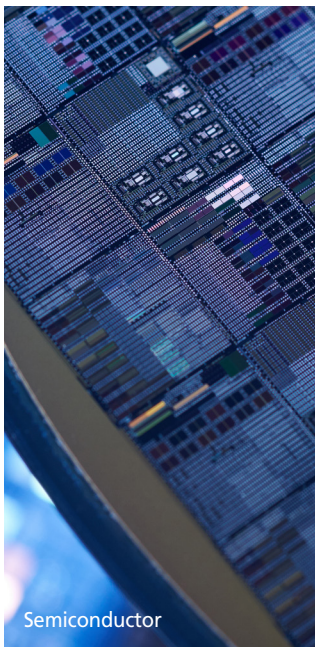


VIBRATION ISOLATION SYSTEMS



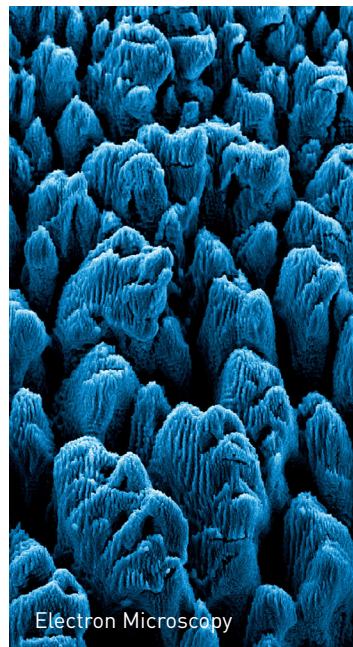
Photonics



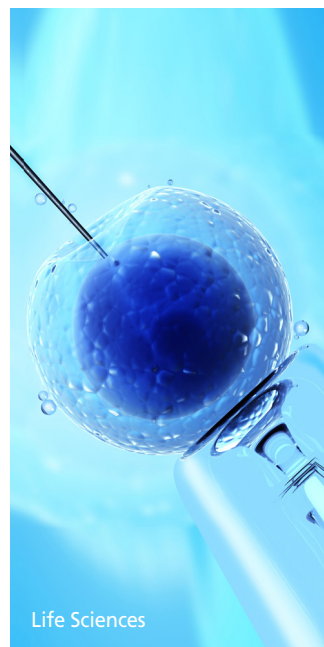
Semiconductor



Metrology



Electron Microscopy



Life Sciences

DVIA-MB Series

Base Active Vibration Isolation Platform



DVIA-MB Series

· Designed for Electron Microscopes

DVIA-MB is the ultimate base active vibration isolation platform for all commercial electron microscopes such as SEM and TEM. DVIA-MB provides the optimal environment, enabling electron microscopes to obtain high-resolution images of biological and non-biological specimens by reducing vibrations in the critical range of 1-5 Hz where the electron microscopes are extremely susceptible to the low frequency vibrations.



DVIA-M Isolator

· Superior Active Vibration Isolators

DVIA-MB consists of four units of active vibration isolators in which the elements of air springs and active isolation technology are embedded. The integrated sensors and actuators effectively reduce the low frequency vibrations and starts to isolate vibrations from 0.5 Hz, achieving 90% vibration isolation at 2 Hz. The elements of air springs support payloads from 500 kg to 6000 kg and reduces high frequency vibrations.

· Ultimate Hybrid Active Optical Table

The combination of optical table with honeycomb steel core structure and the DVIA-M active isolators offers superior vibration isolation performance and damping for the most challenging applications.



DVIA-MO Series

· On-Site Tuning for Maximum Performance

Vibration levels vary with environment, location, vibration sources, etc. Therefore, we offer on-site tuning performed by our experienced engineers to guarantee the maximum performance level and customers' satisfaction. The engineer conduct a site survey to measure vibration data which is used to tune the feedback and feedforward control systems, maximizing vibration isolation performance.



Custom Granite Table Platform

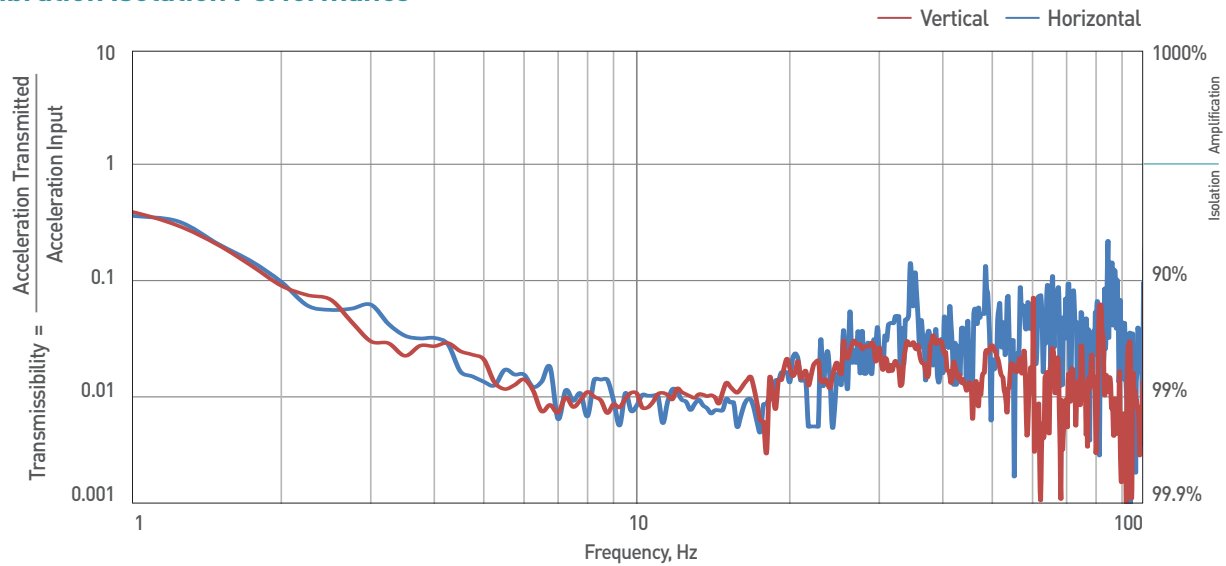


Custom Cradle Platform

· Custom Active Isolation Platforms

We customize platforms to fit all electron microscope models.

Vibration Isolation Performance



Specifications

Model No.		DVIA-MB1000	DVIA-MB3000	DVIA-MB6000
Dimensions (W x D x H)	Isolator Unit	190 x 190 x 180 mm	232 x 232 x 180 mm	308 x 308 x 180 mm
	Platform	Customize to Fit		
Maximum Load Capacity		500 – 1700 kg	1500 – 3500 kg	3000 – 6000 kg
Actuator		Electromagnetic Actuator		
Maximum Actuator Force		Vertical : 40 N, Horizontal : 20 N		Vertical : 80 N Horizontal : 40 N
Active Isolation Range		0.5 – 100 Hz		
Degrees of Freedom		6 degrees		
Vibration Isolation Performance		50 – 80% at 1 Hz / ≥90% at ≥2 Hz		
Settling Time		≤0.3 sec*		
Input Voltage (V)		AC 80 – 260 V / 50 – 60 Hz		
Power Consumption (W)		Maximum 110 W , Below 50 W in normal operation		
Operating Range	Temperature (°C)	5 – 50 °C		
	Humidity (%)	20 – 90%		
Required Air Pressure		≥5 kg/cm ²		

*0.3 sec settling time is measured after 90% reduction of input. (The settling time varies with several conditions, such as payload, force, natural frequency, etc.)



FEI TEM

BRUKER NMR

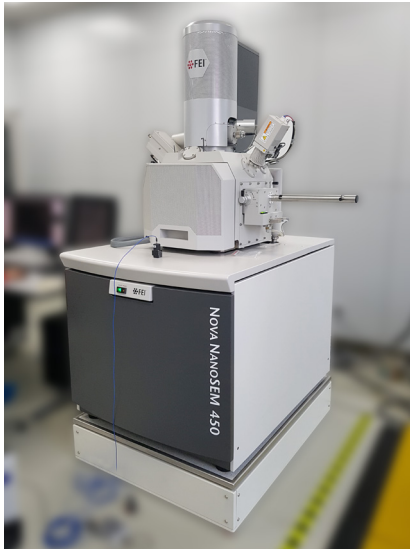
HITACHI SEM

ZEISS SEM

Applications

- Scanning Electron Microscopy (SEM)
- Transmission Electron Microscopy (TEM)
- Scanning Tunneling Microscopy (STM)
- Scanning Probe Microscopy (SPM)
- Nuclear Magnetic Resonance Spectroscopy (NMR)
- High-Performance MetrologyTools

DVIA-MB Case Study #1

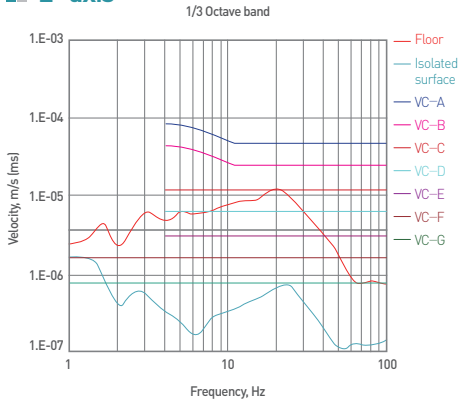


FEI Nova NanoSEM 450

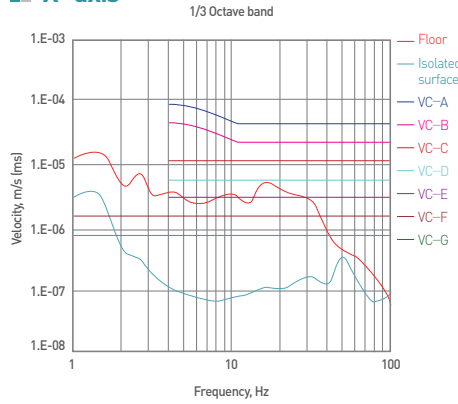
- The site survey indicated that the floor vibration was VC-C in z-axis, VC-D in x-axis and VC-C in y-axis.
- DVIA-MB series base active vibration isolation platform significantly reduced the floor vibration to VC-F in z-axis, VC-E in x-axis and VC-E in y-axis.

VC-Curves		
Test Direction	Floor	Isolated Surface
Z-axis	VC-C	VC-F
X-axis	VC-D	VC-E
Y-axis	VC-C	VC-E

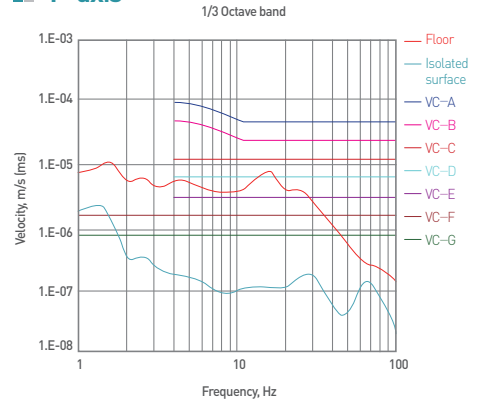
Z-axis



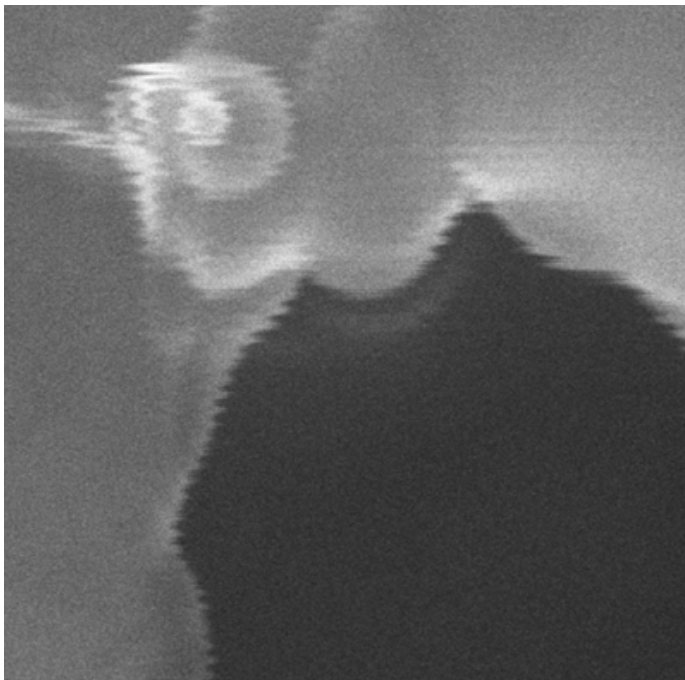
X-axis



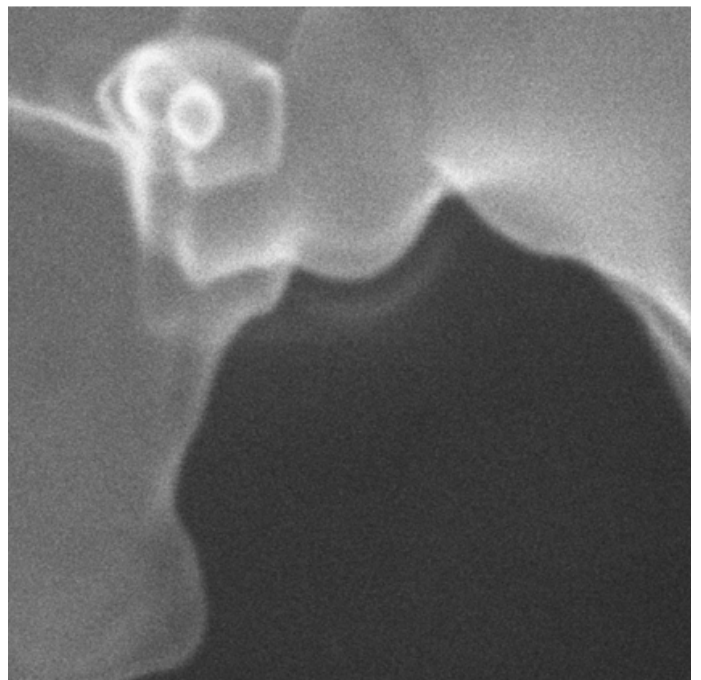
Y-axis



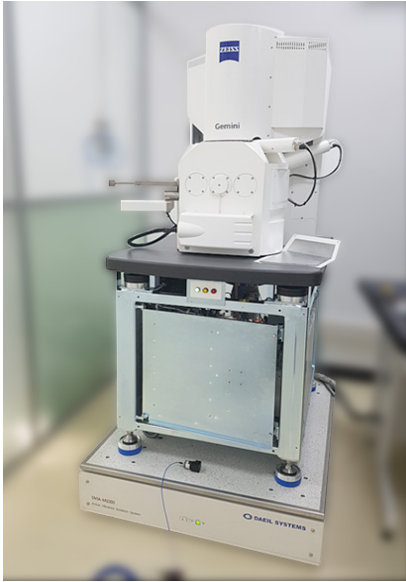
Before



After



DVIA-MB Case Study #2

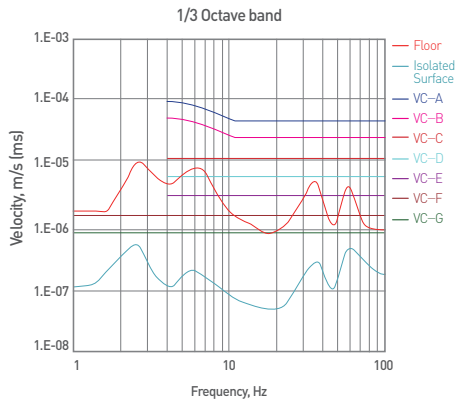


ZEISS Gemini SEM

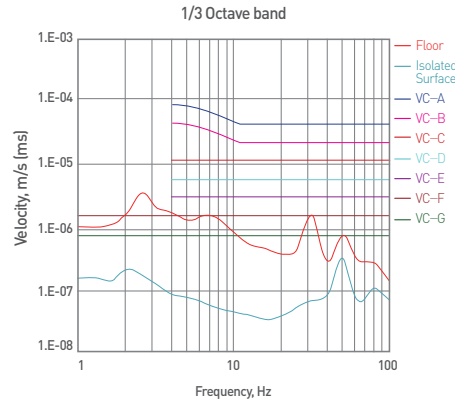
- The site survey indicated that the low frequency vibration was adversely affecting the SEM.
- The site survey indicated that the measured floor vibration was VC-D in z-axis, VC-E in x-axis and VC-E in y-axis.
- DVIA-MB remarkably reduced the floor vibration to VC-G in all axes.

VC-Curves		
Test Direction	Floor	Isolated Surface
Z-axis	VC-D	VC-G
X-axis	VC-E	VC-G
Y-axis	VC-E	VC-G

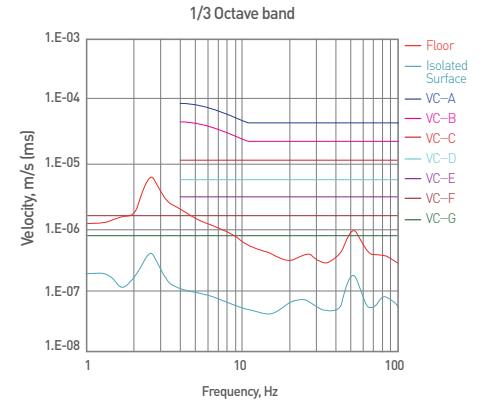
Z-axis



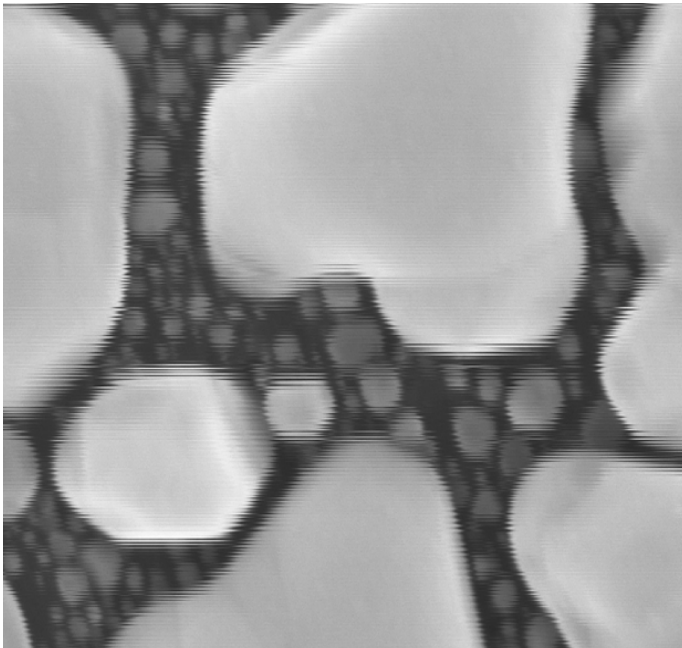
X-axis



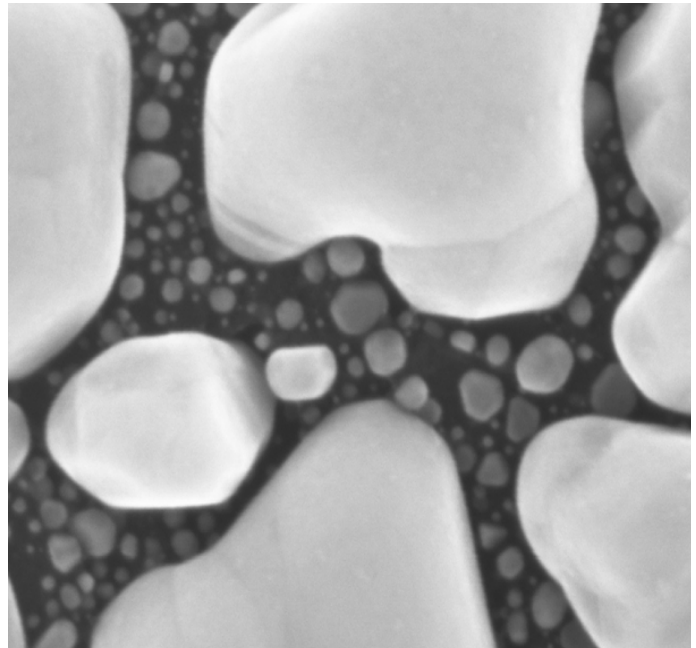
Y-axis



Before



After





Enabling Vision for the Future.

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Enabling Vision for the Future.

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