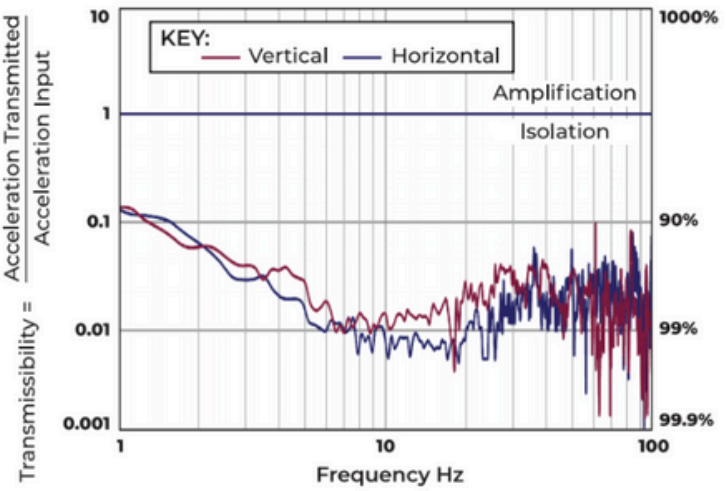
DAEIL SYSTEMS DVIA-ML LOW-PROFILE

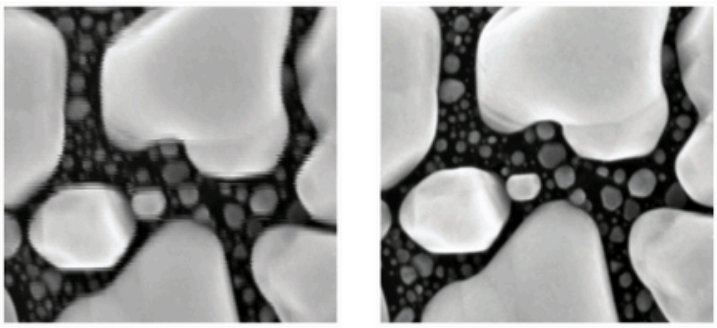
DESCRIPTION

The DVIA-ML is the preferred active vibration isolation system for high- & ultrahigh-resolution electron microscopes and analytical equipment. The sophisticated active vibration control algorithms deliver top-tier performance in six degrees of freedom.

VIBRATION TRANSMISSIBILITY



80% - 90% vibration isolation at 1 Hz



Before

After

KEY FEATURES

Exceptional Low & High-Frequency Active Vibration Isolation

The DVIA-ML achieves an impressive 80 - 90% vibration isolation efficiency at 1 Hz, starting its isolation effectiveness from as low as 0.5 Hz, thanks to its state-of-the-art active vibration control algorithms.

Enhanced Software with Low-Noise Vibration Control

The DVIA-ML offers advanced PID optimization and a new feedforward D gain to reduce vibrations below 0.5 Hz. Paired with eleven geophone sensors for accurate low-frequency vibration detection and precision actuators at each corner, the DVIA-ML delivers stability and performance even in demanding applications.

Out-of-the-Box Feed Forward Control

Our DVIA isolation systems are equipped with advanced feedforward controls on all models. These controls, utilizing real-time ground sensor measurements, detect and preemptively cancel vibrations before they reach the isolated mass. The dynamic control adapts seamlessly to changing vibration levels, ensuring consistent outstanding performance.

DAEIL SYSTEMS

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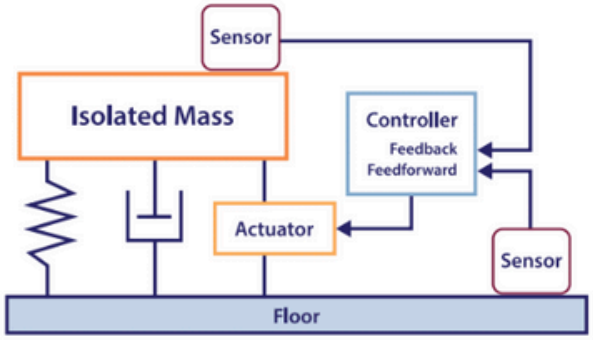
DAEIL SYSTEMS DVIA-ML LOW-PROFILE

LESS SENSITIVE TO VARIATIONS IN FLOOR STIFFNESS

The DVIA-ML series uses a pneumatic passive component and feedforward control for active isolation, making it less dependent on floor stiffness than piezoelectric systems.

HOW DOES DVIA-ML WORK?

The DVIA-ML uses the feedback & feedforward control systems to continuously detect vibrations disturbing an isolated payload base and instantaneously react to minimize vibration in real time.



TECHNICAL SPECIFICATIONS

Model No.		DVIA-ML1000
Dimensions (WxDxH)	Isolator Unit	288 x 288 x 155
	Platform	Custom-Made
Maximum Load Capacity		1700 kg
Actuator		Electromagnetic Actuator
Maximum Actuator Force		Vertical: 40 N, Horizontal: 20 N
Active Isolation Range		0.5 - 200 Hz
Degrees of Freedom		6 Degrees
Vibration Isolation Performance		80 - 90% at 1 Hz
Input Voltage (V)		100 - 260V AC / 50-60 Hz
Power Consumption (W)		Maximum 110W, Below 50W in normal operation
Operating Range	Temperature (°C)	5-50 °C
	Humidity (%)	20-90%
Required Air Presure		4-6 kg/cm²
Settling Time		≤0.3 sec*

*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.)

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