

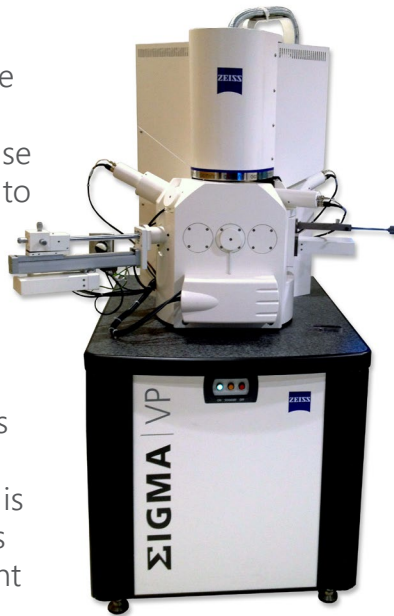


HERZAN SOLUTIONS GUIDE FOR ELECTRON MICROSCOPY

OVERVIEW

Electron microscopes are furthering the line of what can be seen on the nanoscale level. Magnifying a sample image upwards of one million X requires the quality of data to be precise and the stability of the environment to be absolute.

Environmental stability is Herzan's speciality and has been so for over two decades. Delivering acoustic, vibration, and EMI isolation solutions for countless applications (especially electron microscopes), Herzan is prepared to partner with researchers worldwide and help the advancement of data acquisition.



HERZAN SOLUTIONS

Solutions for Vibration Noise

- Modular/Scalable Active Vibration Isolation Platforms

Solutions for Acoustic Noise

- Modular SEM Acoustic Enclosures
- EM Pump, Chiller, and Compressor Acoustic Enclosures

Solutions for EMI Noise

- Magnetic Active Cancellation System

**HERZAN**

WWW.HERZAN.COM

23042 Alcalde Drive, Suite E
Laguna Hills CA 92653

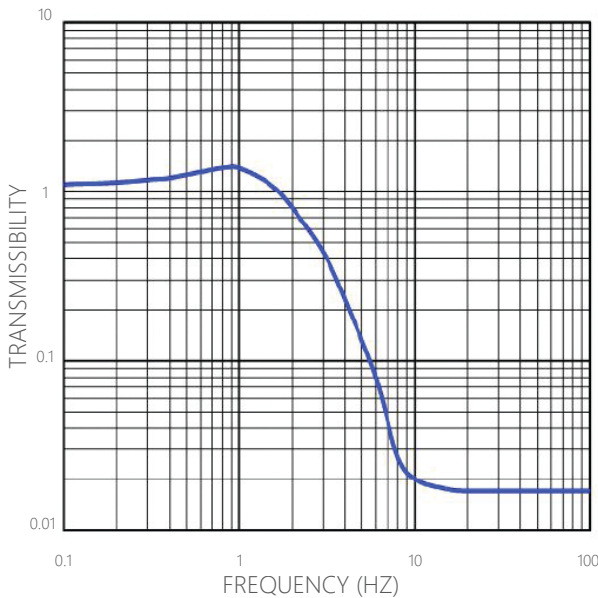
E: sales@herzan.com

T: (949) 363-2905

W: www.herzan.com



TRANSMISSIBILITY



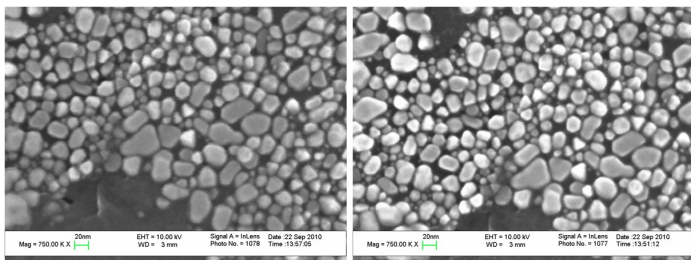
PROBLEM: Vibration Noise SOLUTION: Active Vibration Isolation Platforms (AVI Series)

Achieving maximum resolution can be made possible by utilizing Herzan's AVI Series: the premier active vibration isolation solution available for electron microscopes. The AVI Series is a modular, low profile, active vibration isolation platform that achieves sub-hertz vibration isolation performance across all six degrees of freedom.

The isolation technology within the AVI Series consists of piezoelectric vibration sensors, control electronics, and actuators, which dynamically respond to vibrations within the environment and provide an attenuated signal to the top plate of the isolators. The AVI Series provides 90% vibration reduction at 2.5 Hz, 99% reduction at 10 Hz, and 99.8% reduction at 70 Hz and beyond.

POPULAR UPGRADES:

- Top plate (i.e. aluminum, breadboard, etc.)
- LFS System
- Exciter box (turns platform into a shaker)
- And more!



Without AVI Platform

With AVI Platform



23042 Alcalde Drive, Suite E
Laguna Hills CA 92653

E: sales@herzan.com
T: (949) 363-2905
W: www.herzan.com



Modular / Customizable EM Acoustic Enclosure

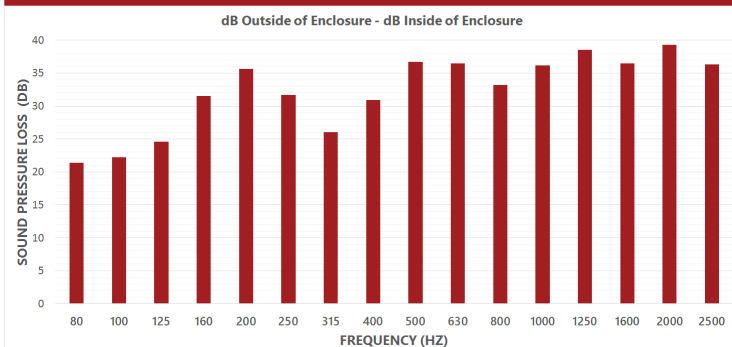
PROBLEM: Acoustic Noise
SOLUTION: Modular/Paneled EM Acoustic Enclosure

Utilizing a modular panel design, Herzan's acoustic enclosures for electron microscopes provides the most acoustically sound environment possible, while being easy to operate and simple to maintain.

Each enclosure comprises of numerous variable density layers with carefully chosen high quality components to optimize acoustic dampening performance throughout the broad frequency spectrum.

Herzan carefully articulates the design of every EM acoustic enclosure to represent the specific needs of each application. Incorporating accessibility and form factor accommodations unique to each lab environment, Herzan's modular and paneled acoustic enclosures deliver a premier solution for a great value.

ACOUSTIC ISOLATION PERFORMANCE



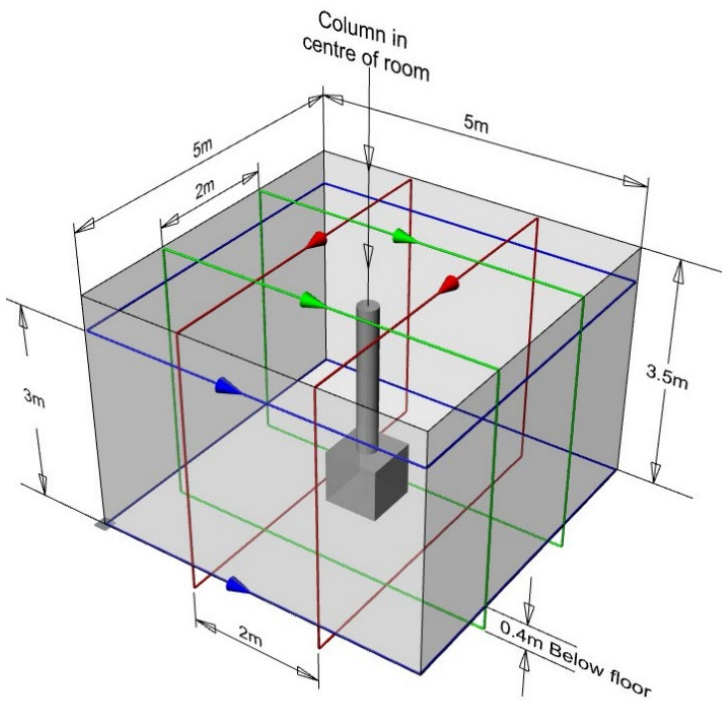
23042 Alcalde Drive, Suite E
 Laguna Hills CA 92653

E: sales@herzan.com
 T: (949) 363-2905
 W: www.herzan.com



PROBLEM: AC/DC Fields
SOLUTION: Magnetic Field
 Cancellation System (from Spicer Consulting)

Ambient magnetic fields compromise the resolution and image quality of electron microscopes. To solve this problem, Herzan partners with Vibration Engineering Consultants (Exclusive distributor of magnetic field cancellation systems from Spicer Consulting), to offer electron microscopes the best operating environment when strong magnetic fields are present within a lab. The magnetic field cancellation system stabilizes fields within the lab by dynamically creating nearly equal or opposite field changes, causing a substantial improvement in terms of image quality and performance.



Installation for TEMs and new Lab Builds

FEATURES:

- Touch screen intelligent user interface with automatic setup
- Simultaneous AC/DC field display with choice of Tesla/Gauss units
- AC sensors for cancelling 50/ 60 Hz AC line fields or DC sensors for cancelling tram and train DC fields + 50/60Hz
- Adapts to field changes within 100 μ s
- Built-in test field generator
- Ethernet and USB ports for remote operation and monitoring



23042 Alcalde Drive, Suite E
 Laguna Hills CA 92653

E: sales@herzan.com
 T: (949) 363-2905
 W: www.herzan.com