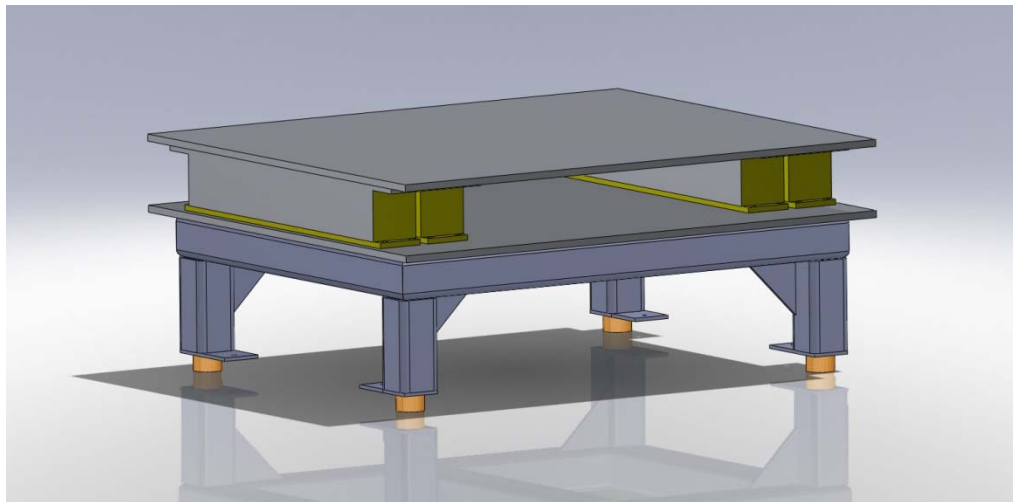


Support Stand for A VI-400M **Active** Vibration Isolation System *User Guide*



23151 Alcalde Drive, Suite B-3
Laguna Hills, CA 92653

TEL: (949) 363-2905

FAX: (949) 340-9751



Note on Equipment Safety

The support should be bolted to the foundation before mounting loading plates and/or isolation modules.

Items Included

- Support Frame
- Two Aluminum Mounting Plates
- AVI-400 Modular Active Vibration Isolation System
 - + Two Isolation Modules
 - + Controller
 - + Four D-Sub Cables
 - + Power Cord
 - + Toolset (Hex wrench and fixed wrench)
- Installation Documents

Tools Required

Crescent wrench
5/32 hex key
(4) ½" Anchor Bolts

Placement of Instrument and Support Frame

The supports should be placed in a stable location. It is an unfortunate fact of life that the amplitudes of the vertical vibrations of the building (dominantly bending modes of the floor) are largest in the center of the floor, where most experiments are situated! It is best to place the supports as near to a supporting wall or pillar as possible. Also, the best vibration conditions are usually found on a building's ground floor. If possible, locate the supports, modules, and instrument on the ground floor. Care should be taken to place the set-up far removed from any noise-generating equipment such as pumps, motors, or HVAC equipment.



23151 Alcalde Drive, Suite B-3
Laguna Hills, CA 92653

TEL: (949) 363-2905

FAX: (949) 340-9751



Placing the Frame

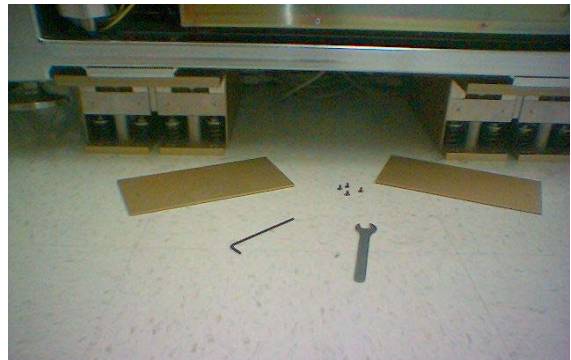
1. Place the frame on the floor in the desired location.
2. Adjust the leveling feet to the desired height. The mounting plates and isolation modules will add approximately 5.5”.
3. Check the level. Adjust leveling feet as necessary
4. Using the jam nut, tighten the nut against the base of the support frame leg.

Placing the Base Mounting Plate

1. Place one of the 39” x 30” base plates on top of the frame. The plate will overhang the frame 1” along the length and 2” along the width. See attached drawing AVI-400 Cleanroom Support Stand.
2. The plates are held in place by gravity and the weight of the instrumentation. If addition of seismic restraints is required, please consult with Herzan engineering staff to determine appropriate method.

Placing the Modules

1. Place the modules on the base plate as shown in drawing AVI-400 Cleanroom Support Stand.
2. The side walls of the modules are 1” from the edge of the mounting plate. The end walls are 4.9” from the edge of the plate.
3. It is recommended to remove the end plates from the modules. There are springs that will need to be adjusted for the load once the tool is placed on the mounting plates. Removing end plates prior to the addition of the top mounting plate will ease access for subsequent load adjustment.



Place the Top Plate

1. Set the other mounting plate on the isolation modules according to drawing AVI-400 Cleanroom Support Stand.



**23151 Alcalde Drive, Suite B-3
Laguna Hills, CA 92653**

TEL: (949) 363-2905

FAX: (949) 340-9751



Place the Zyvex nProber

1. Place the Zyvex nProber system on the top plate.
2. Adjust the springs at the ends of the isolation modules per the AVI-400 Installation Manual. An excerpt describing the adjustment is printed below.

Adjusting the Modules for Load of SEM

1. Use 2 mm hex wrench (included) to remove end plates of modules.
2. Adjust the modules for the weight of the SEM.

A. There should be a gap above and below the cross brace on each central column, allowing for approximately 2 mm of travel on each side (see Figure 3).

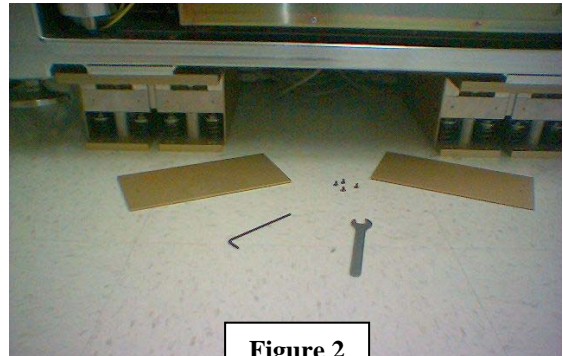


Figure 2

B. Use the M6 spanner wrench (included) to turn the adjustment nuts located on top of the support springs (see Figure 4). Turning the wrench to the RIGHT lowers the modules and INCREASES the upper gap (between the central stopper nut and the cross brace). Turning the wrench to the LEFT raises the modules and DECREASES the upper gap.

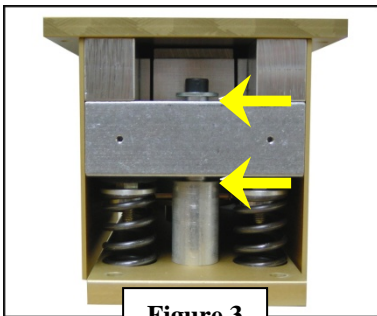


Figure 3

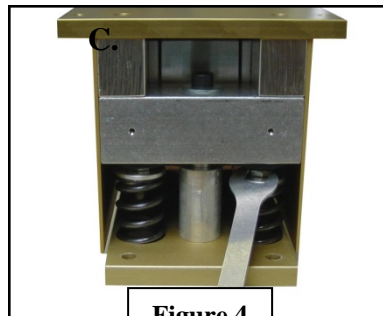


Figure 4

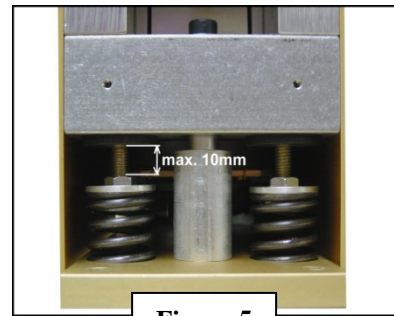


Figure 5

D. Count the number of turns on each nut; adjust all nuts as equally as possible. It is not essential for the gap to be exactly the same on all central columns.

E. Do not turn the nuts too far or you may damage the system. Under no circumstances should there be over 10 mm of exposed threads (see Figure 5).

3. Replace end plates on the modules.



23151 Alcalde Drive, Suite B-3
Laguna Hills, CA 92653

TEL: (949) 363-2905

FAX: (949) 340-9751

Verifying Performance of the Isolation System

1. Replace SEM side panels (if necessary). Check that all cables to isolation system AND SEM are connected loosely. Check to make sure nothing is coupling the SEM to the ground or other vibration sources.
2. Plug the power cable into the rear of the controller. Flip 'ON' switch on the front panel. Press red button to enable active isolation.
3. After several seconds the enable LED should turn solid, indicating the system is isolating properly. When tapping the SEM lightly, red lights on controller should light up briefly and then go out.
4. If one or more light stays on continually, if lights do not remain off in normal condition, or if lights will not activate with tapping, then the sensors are being overloaded. Please double check the following: that nothing is touching the modules, that all cables to modules and SEM are slack, and that the modules are adjusted properly for load. If all of these are in order and the lights are still behaving abnormally, please contact Herzan.



Please contact Herzan with any questions, support@herzan.com or 949-363-2905.



23151 Alcalde Drive, Suite B-3
Laguna Hills, CA 92653

TEL: (949) 363-2905

FAX: (949) 340-9751

