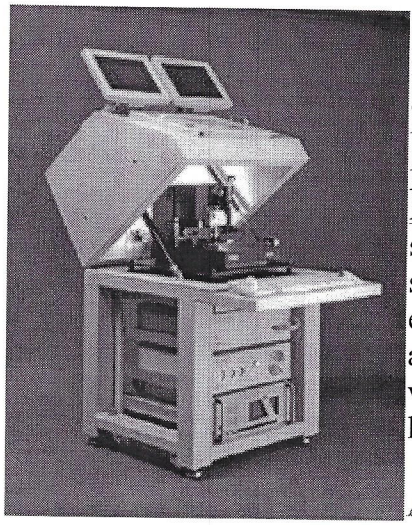
di **NanoScope Products**

Integrated Acoustic/Vibration Isolation System
For the Dimension™ 3100 SPM



The Nanoscope® Dimension 3100 Scanning Probe Microscope (SPM) is a low-noise system specifically designed to produce measurements at the nanometer (lateral) and sub-angstrom (vertical) scales. To meet these specifications where ground vibration and/or acoustic noise are prevalent, we offer an optional small footprint Integrated Acoustic/Vibration Isolation System (IS3K). This isolation system is strongly recommended for users who are interested in imaging surfaces with roughness levels of <10nm RMS, such as those encountered in the semiconductor, data storage, and optics industries, as well as for users who plan to place the microscope in environments with high acoustic and ground noise, such as clean rooms or laboratories.

Acoustic Isolation

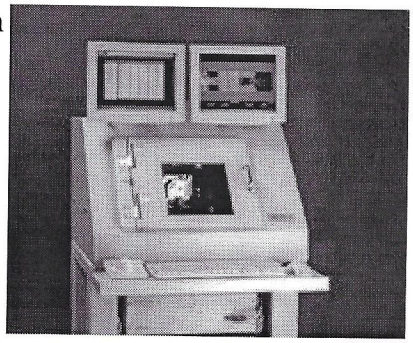
The Integrated Acoustic/Vibration Isolation System provides true acoustic isolation by enclosing the vibration isolation platform within the acoustic hood. This is accomplished by resting the hood on the frame surrounding the isolation system, not on the isolation platform itself. This design prevents coupling between the acoustic and vibration isolation systems which could hamper noise reduction. Acoustic noise is damped by a specially filled and sealed metal hood. All exposed surfaces are easily-cleaned, nonparticulating paints over metal.

Vibration Isolation

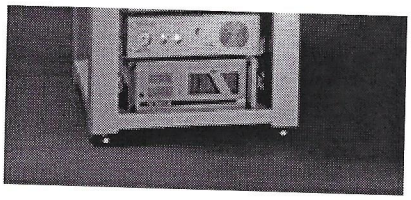
The vibration isolation platform is a mechanical system that uses no air (no particles due to valve exhaust), and requires no assembly at site. It has optimal damping already tuned for the Dimension 3100, producing the best noise results of any system available.

Summary

By integrating the effective designs of acoustic and vibration isolation into one assembly, a low-noise environment is created which enables the Dimension 3100 SPM to produce the high resolution images and measurements for which it was designed. The optional Integrated Acoustic/Vibration Isolation System is highly recommended for nanometer to sub-angstrom roughness studies and for high acoustic and ground noise environments.



Specifications:



- **Model:**
  IS3K

- Weight:
  1200lb (545kg)

- Dimensions (hood open):
  30.5 inches wide x 48 inches long x 62 inches high (77cm x 122cm x 157cm)

- Natural Frequency:
  3/4 Hz typically in vertical and 1.5 Hz in horizontal

- Vacuum Supply:
  User supplied air hose must have 0.25 inch OD and 0.17 inch ID
  Vacuum supply must be 30mm Hg.

- Noise level:
  <0.5Å RMS in vertical (z) dimension in acoustic environment of 80 dB white noise. (Test condition - surface tracking servo gain set to repeatably resolve 10nm scale texture on polished silicon wafer surface at scan size of 1μm x 1μm and scan rate of 2.5Hz)

Note:

We do not recommend placing vibration isolation tables on raised floors or computer-type floors. They may be placed on the solid slab underneath a raised floor. Please contact our technical staff before ordering.

Send comments to webmaster@di.com

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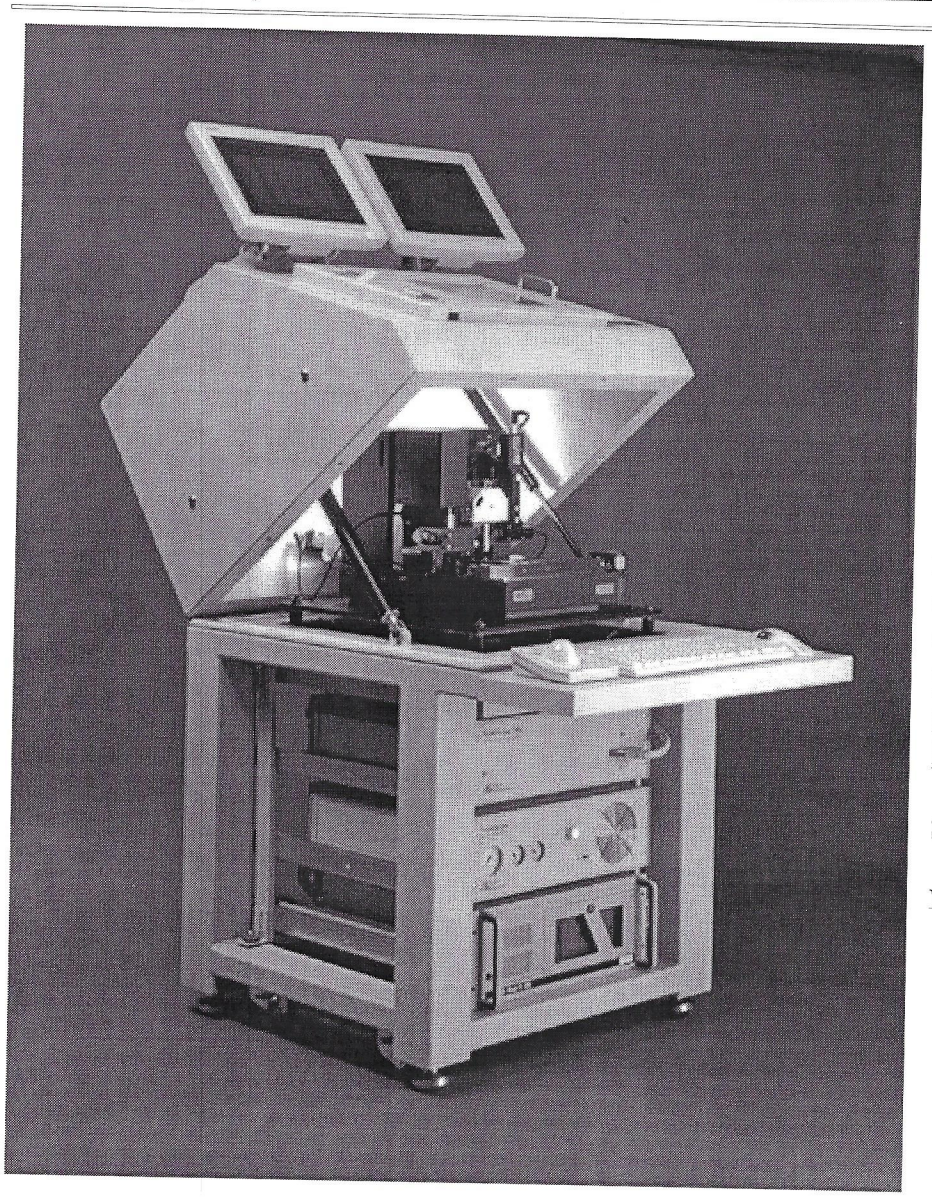

The Integrated Acoustic/Vibration Isolation System allows your Dimension 3100 SPM to produce measurements at the nanometer (lateral) and sub-angstrom (vertical) scales in noisy environments.

Send comments to

webmaster@di.com