### Specifications

**A-type (Auto-Leveling Type)**

- **Resonant Frequency (Vertical):** 1.5 – 3.0 Hz
- **Resonant Frequency (Horizontal):** 1.0 – 2.0 Hz *3D Model Only
- **M Type Air Supply System:** Manual Air Pump
- **A Type Air Supply System:** Air Compressor / Air Supply
- **A Type Leveling Method:** Auto-Leveling (3 Level Sensors included)

**Top Plate Options:**
- A. Steel laminated with vibration reducing sheet
- B. Mechanical process and black coating finish
- C. Ferromagnetic stainless steel
- D. Ferromagnetic stainless steel with mounting holes M6-50mmXY
- E. Ferromagnetic stainless steel with mounting holes M6-25mmXY

**Top Plate Options:**
- High-Damping Finish *3D Model Only

**Frame Options:**
- Frame Options: High-Damping Finish *3D Model Only
- Load Capacity: 30kg, 50kg, 70kg, 90kg

**System Feet:**
- Extra-Rigid Insulator *3D Model Only

**A Type Accessories:**
- Hand Pump, Schrader Valve Wrench, Instruction Manual x 1 each

**M Type Accessories:**
- Hand Pump, Schrader Valve Wrench, Instruction Manual x 1 each

External air supply for A type models not included. Air compressor, nitrogen tank, or air supply will need to have pressure of 0.2 – 0.3MPa (max.). Herz offers silent air compressors. More information available upon request.

Information and performance data shown in the above subject to change without prior notice.

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**Supporting the measuring environment**

**DT - Desktop Vibration Isolation System**

**M-Type External Dimensions**

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Units: mm

Blue color indicates the height of 3D.

**A-Type External Dimensions**

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Units: mm

Blue color indicates the height of 3D.
Into the Nanotech Era

Herz has developed the new DT vibration isolation system over the past twenty years with the challenges of nanotechnology research in mind. The measuring environment of the nanotechnology era presents new challenges that require the latest in vibration isolation and vibration control. In response to this, Herz has improved on the isolation mechanism to produce the 3D/DT. After conducting modal analysis on the new damping feet and compliance tests on the mounting plate, we have changed the design of the DT to offer the most reliable desktop vibration isolation solution for the Nanotechnology Era.

3D/DT-A Desktop Vibration Isolation System

DT-A Desktop Vibration Isolation System

First mode FREQ=3871Hz
Fourth mode FREQ=14011Hz

Without Isolation
With Isolation

The 3D/DT-A and the DT-A systems use an external air supply (air compressor, air supply, or nitrogen tank). The DT’s air regulator ensures that the air pressure will be perfectly suited to the instrument that is being isolated. The three auto-leveling sensors maintain the system’s level. The 3D/DT-A features a damping mechanism that provides 360 degree horizontal isolation, high damping finish on the frame and mounting plate, and ultra-rigid damping feet. The 3D/DT-A is the ideal vibration isolation solution for the Nanotechnology Era.

3D/DT-M Desktop Vibration Isolation System

DT-M Desktop Vibration Isolation System

First mode FREQ=18790Hz
Fourth mode FREQ=22200Hz

Compliance Test using impulse hammer

The desktop system with the horizontal isolation mechanism [3D/DT] effectively isolates in three dimensions. The horizontal resonance is at 1.0 – 2.8 Hz. The simple design provides unprecedented levels of isolation performance. Most buildings have floor vibrations in the few Hz – 50 Hz range. The 3D/DT provides great isolation performance in this range.

Modal Analysis of 3D/DT Insulators (Created with ANSYS Workbench Products 7.0)

First mode FREQ=2300Hz
Second mode FREQ=4400Hz
Third mode FREQ=6700Hz
Fourth mode FREQ=8800Hz
Fifth mode FREQ=11200Hz
Sixth mode FREQ=13500Hz

Without horizontal isolation With horizontal isolation

Performance with load of 34 kg

Comparison of compliance for normal system feet and the 3D/DT insulation system (based on impulse hammer strike)

Compliance of 6050M Top Plate

0 00504mm/N
0 00110mm/N
0 00068mm/N

Bo h tests based on DT-6050M

Resonance of normal feet: 39.75Hz
Resonance of 3D insulator feet: 2256Hz

The correct amount of air to make the table float evenly. There is no need for an external air supply so you can easily achieve a vibration-free environment. The 3D/DT-M comes standard with a high-damping finish on the frame and mounting plate that make it a simple, easy-to-use solution for the Nanotechnology Era.