

STACIS[®] LaserTable-Base[™]

Hybrid Piezoelectric/Air Active Vibration Cancellation System



The LaserTable-Base[™] Advantage

- **Offers** an extraordinary level of improvement over existing technology in the amount of vibration isolation attainable with an Optical Table.
- Combines **air and STACIS[®]** technologies into one integrated cancellation system.
- **Modular design** allows for customizing the air sub-system for specific application requirements.

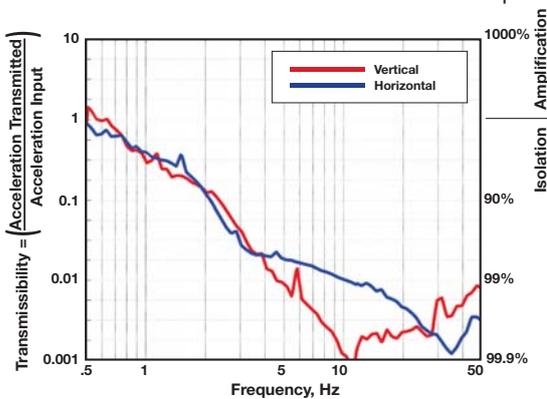
LaserTable-Base[™] offers an extraordinary level of improvement over existing technology in the amount of vibration isolation attainable with an Optical Table.

Typically, Optical Tables are supported by low-frequency pneumatic vibration isolation systems. Though very effective at isolating high frequencies, these passive systems actually amplify vibration in the critical 1 to 3 Hz range.

TMC's STACIS[®] technology overcomes these limitations with piezoelectric actuators and inertial vibration sensors which cancel, not amplify, very low-frequency vibration.

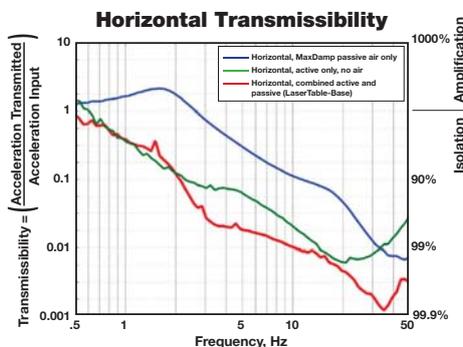
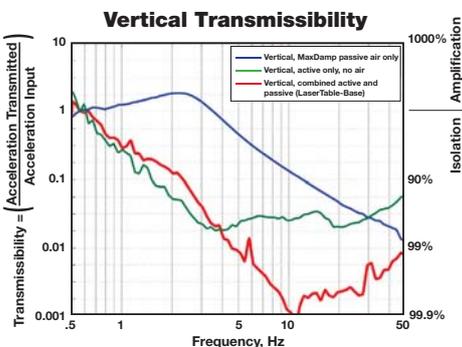
LaserTable-Base[™] combines these two technologies, air and STACIS[®], into one integrated cancellation system. The result is vibration cancellation at very low frequencies and unprecedented levels of high-frequency isolation due to the combined effect of two isolation systems in series.

The upper pneumatic portion of LaserTable-Base consists of unique MaxDamp[®] air Isolators. The modular design allows for customizing the air sub-system for specific application requirements.



Transmissibility

2,000 lbs (907 kg) payload tested with simulated vibration at VC-A (2,000 μ in./s, 50 μ m/s)



Combining the low frequency, passive MaxDamp Air Isolators with a Piezoelectric Active Vibration Cancellation System in series results in an overall transmissibility curve that is the sum of the two individual transmissibility curves. The resultant vibration isolation performance is so dramatic that over some frequency ranges, we are limited by measurement instrumentation noise-floors and unable to measure and demonstrate the full isolation performance. That is, above 10 to 12 Hz, the actual performance of the combined system is expected to exceed that shown since the combined isolation is theoretically the sum of the isolation provided by the two sub-systems.

Features

- Incorporates STACIS[®] technology
- Active inertial vibration cancellation system
- Vibration cancellation starts below 1 Hz
- Extended stroke piezoelectric actuators
- 6 active degrees-of-freedom
- Consists of two isolation systems in series for maximum vibration cancellation
- Incorporates unique MaxDamp[®] Air Isolators
- Simple, robust, and cost-effective
- Installs easily, minimal tuning required
- Optional shelves for mounting equipment under the table
- Includes TMC's DC-2000 Digital Controller

Distribution in the UK & Ireland



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**Characterisation,
 Measurement &
 Analysis**

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